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RADIO/OPTICAL/STRAPDOWN
INERTIAL GUIDANCE STUDY FOR ADVANCED KICK
STAGE APPLICATIONS

LAUNCH VEHICLE DATA (Tasks V and VI)

CONTRACT NO. NAS 12-141

APRIL 1969



Prepared for the
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
Electronics Research Center
Cambridge, Massachusetts

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LAUNCH VEHICLE DATA

This volume contains data and data plots for Tasks V and VI of the Radio/Optical/Strapdown Inertial Guidance System Study. The vehicle configurations considered were:

ATLAS SLV3C/CENTAUR

ATLAS SLV3A/BURNER 2

SATURN IB/CENTAUR

SATURN V/VOYAGER

This data plots include those for:

Trajectory Parameters

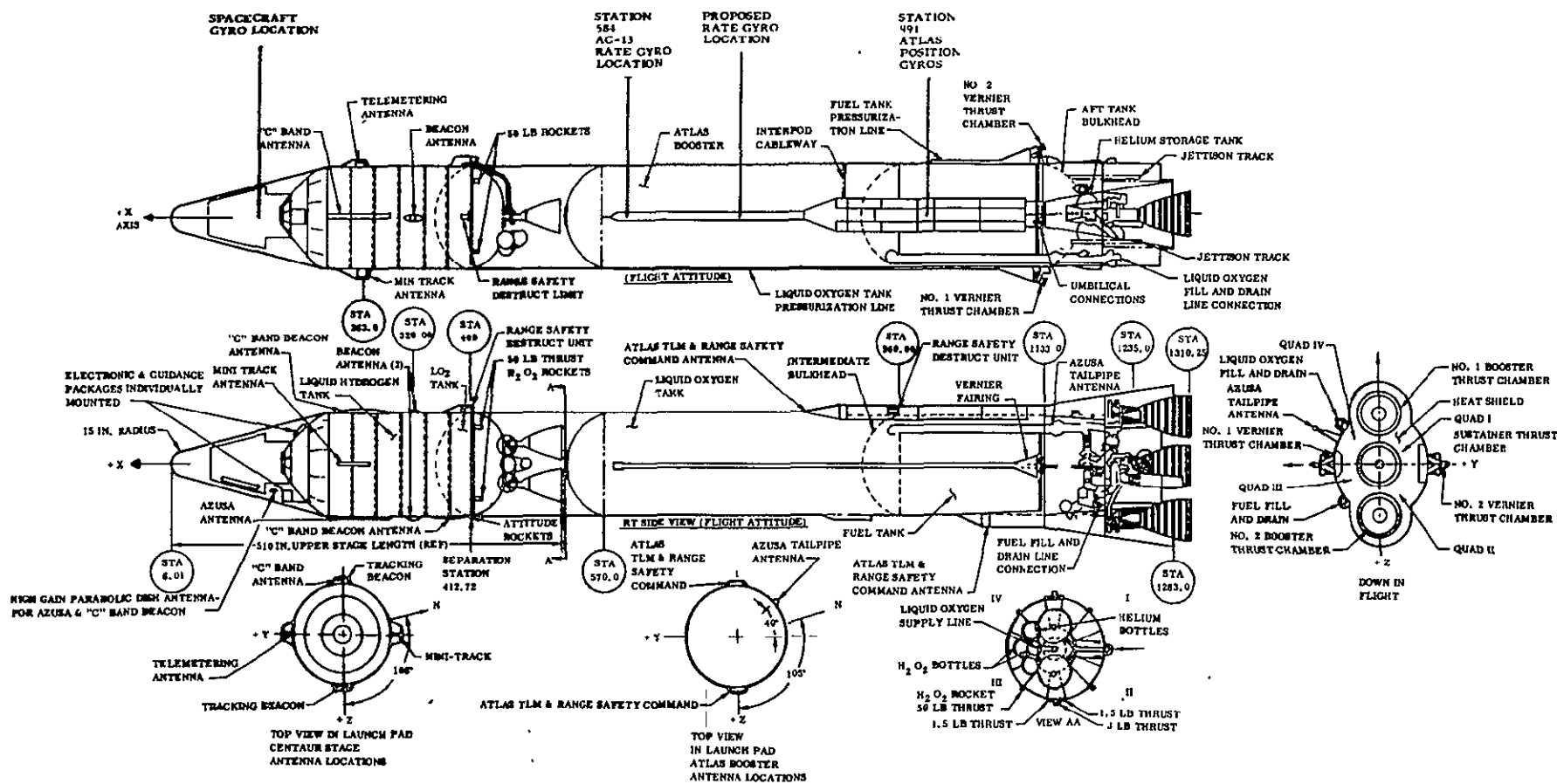
Mass Properties

Aerodynamic Parameters

Bending Data

Propellant Slosh Data

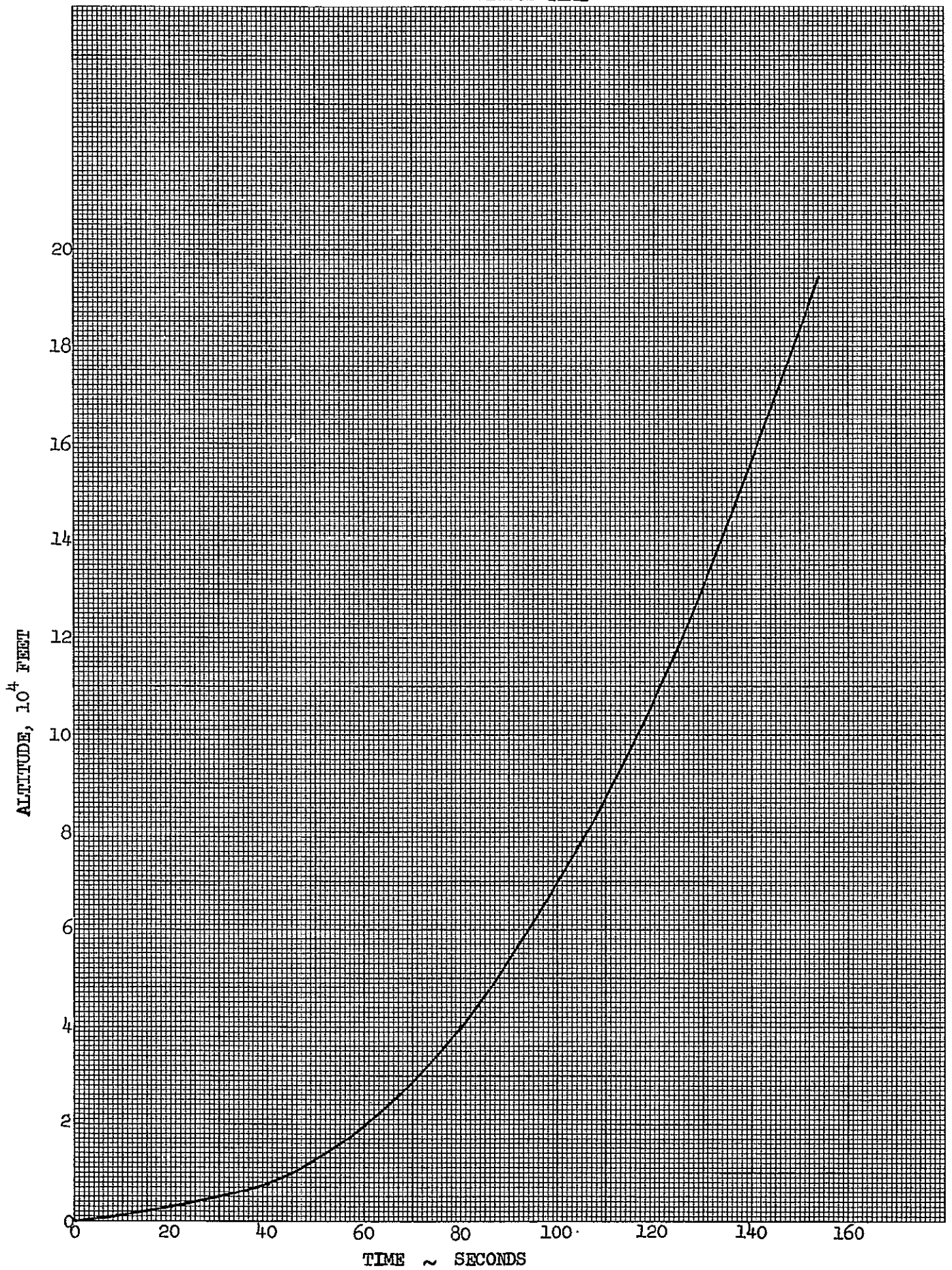
A drawing for each of the vehicle configurations is presented and the thrust control characteristics are included. Some of this data were extracted from previous study results given under Tasks III and IV. Bending mode computer plots are also furnished within this report. A summary of thrust control actuation system transfer functions, rate limits, and deflection limits are given at the end of the report.



Atlas/Centaur General Configuration

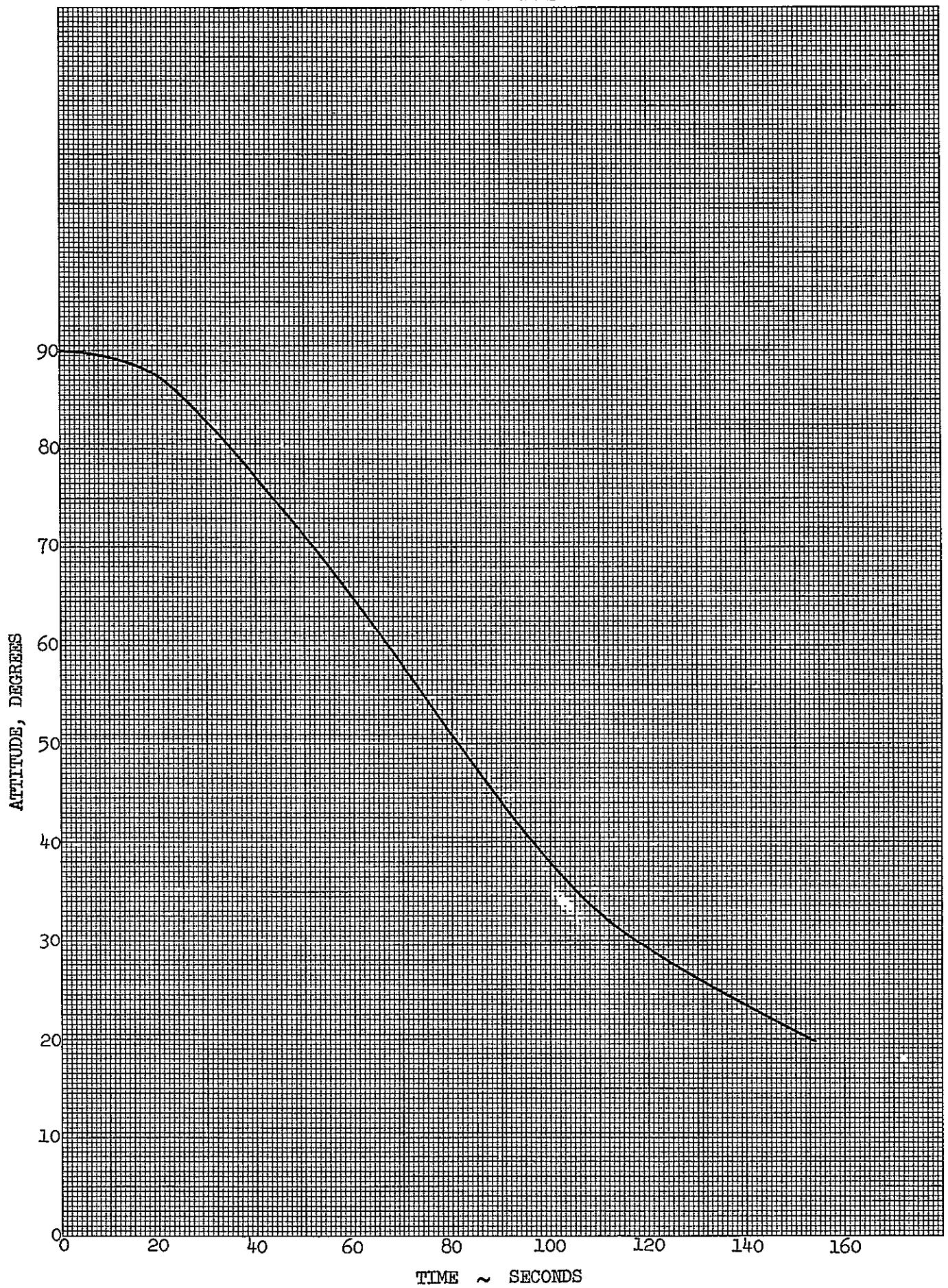
ATLAS SLV 3C/CENTAUR,
ALTITUDE VERSUS TIME

2



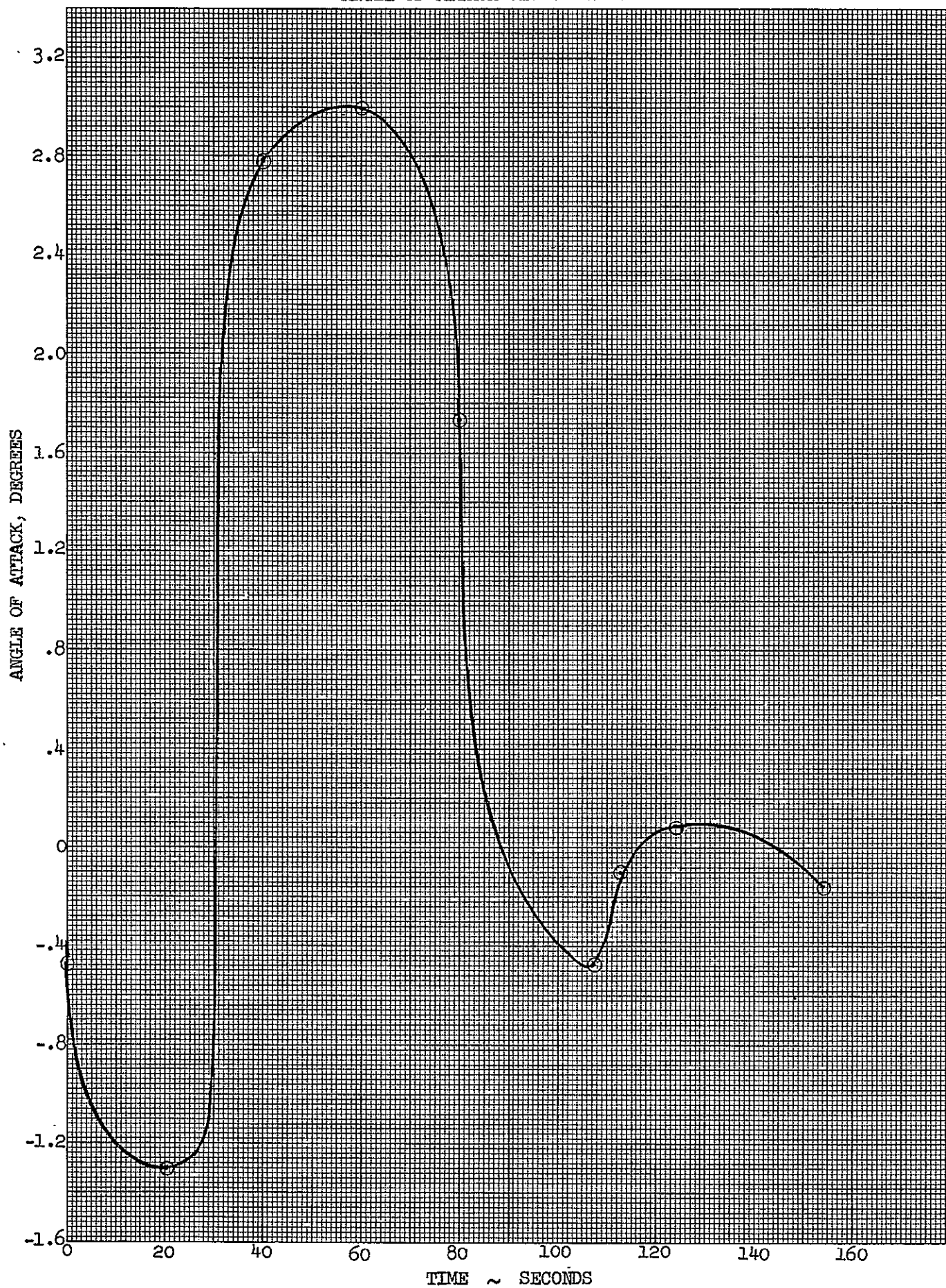
ALTAS SLV 3C/CENTAUR,
ATTITUDE VERSUS TIME

2A



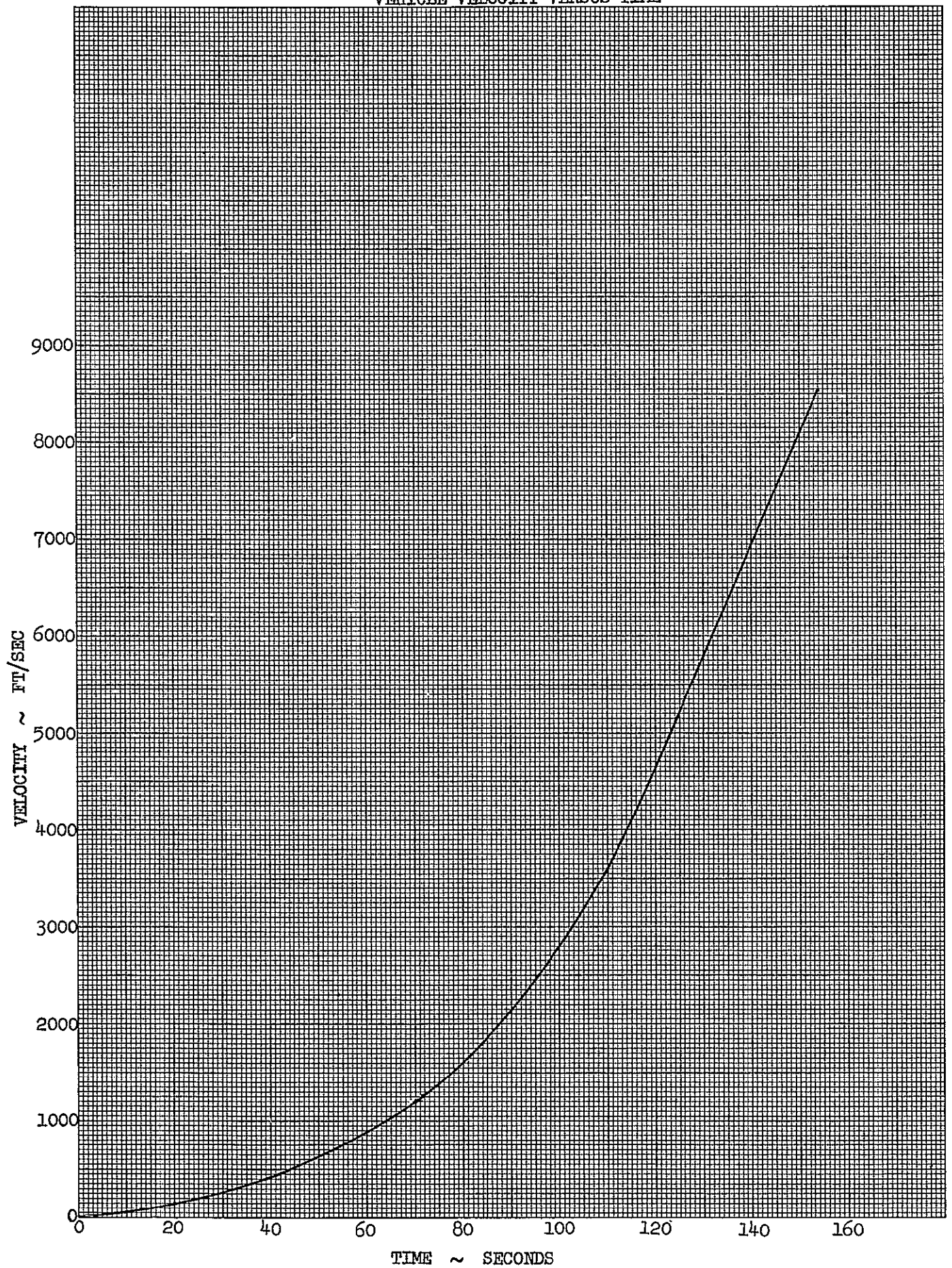
ATLAS SLV 3C/CENTAUR,
ANGLE OF ATTACK VERSUS TIME

3



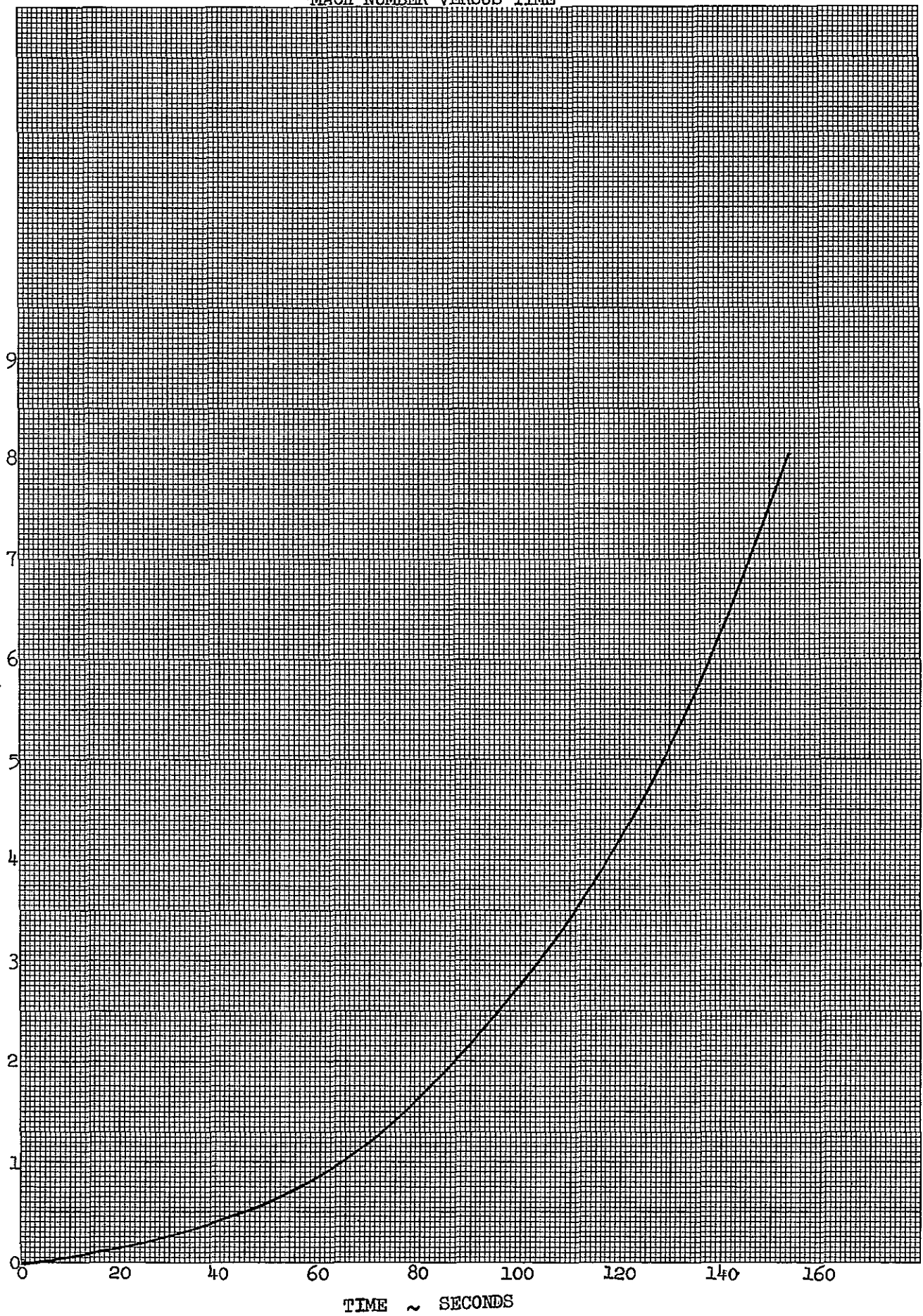
ATLAS SLV 3C/CENTAUR
VEHICLE VELOCITY VERSUS TIME

4



MACH NUMBER VERSUS TIME

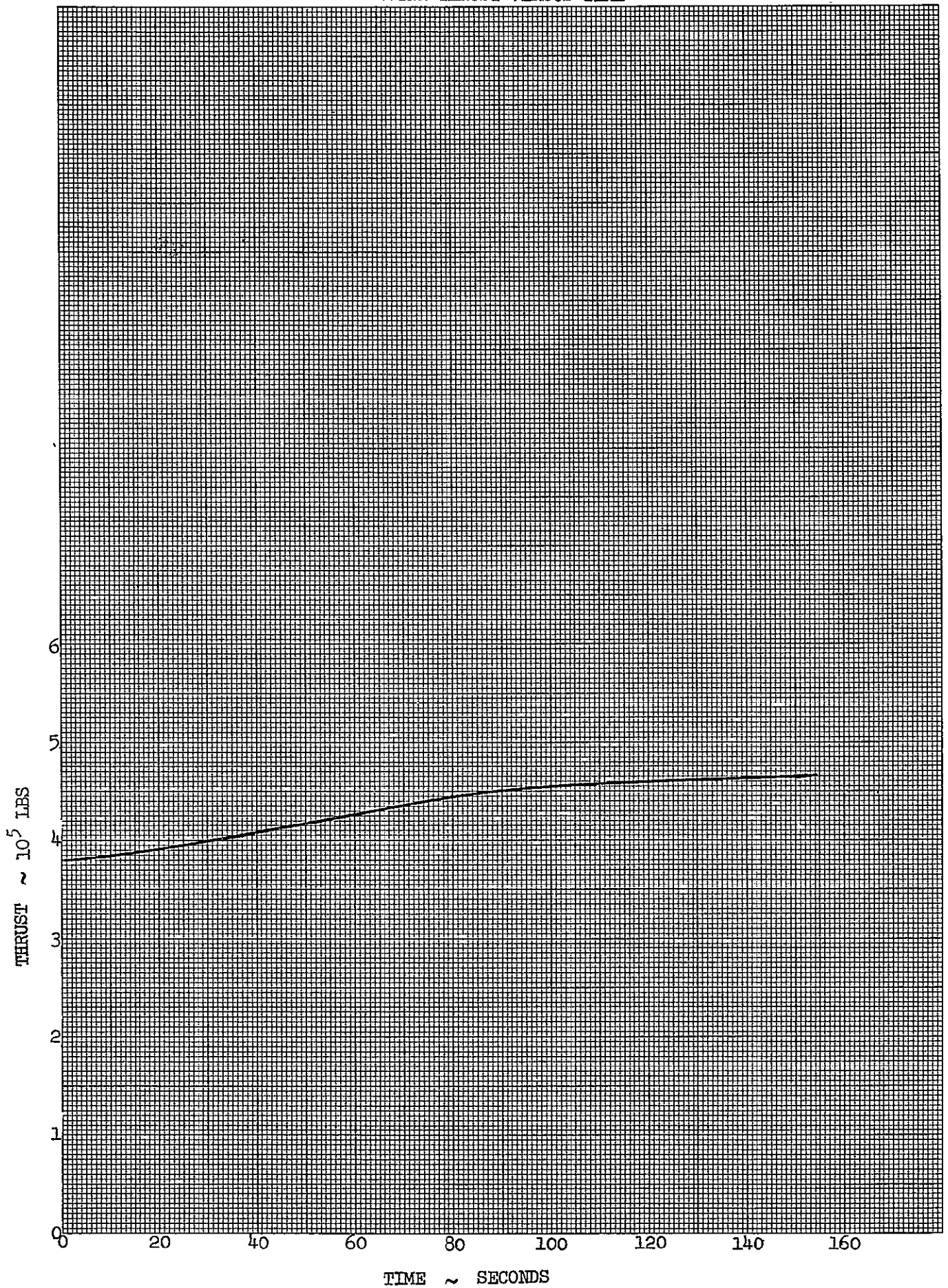
MACH NUMBER

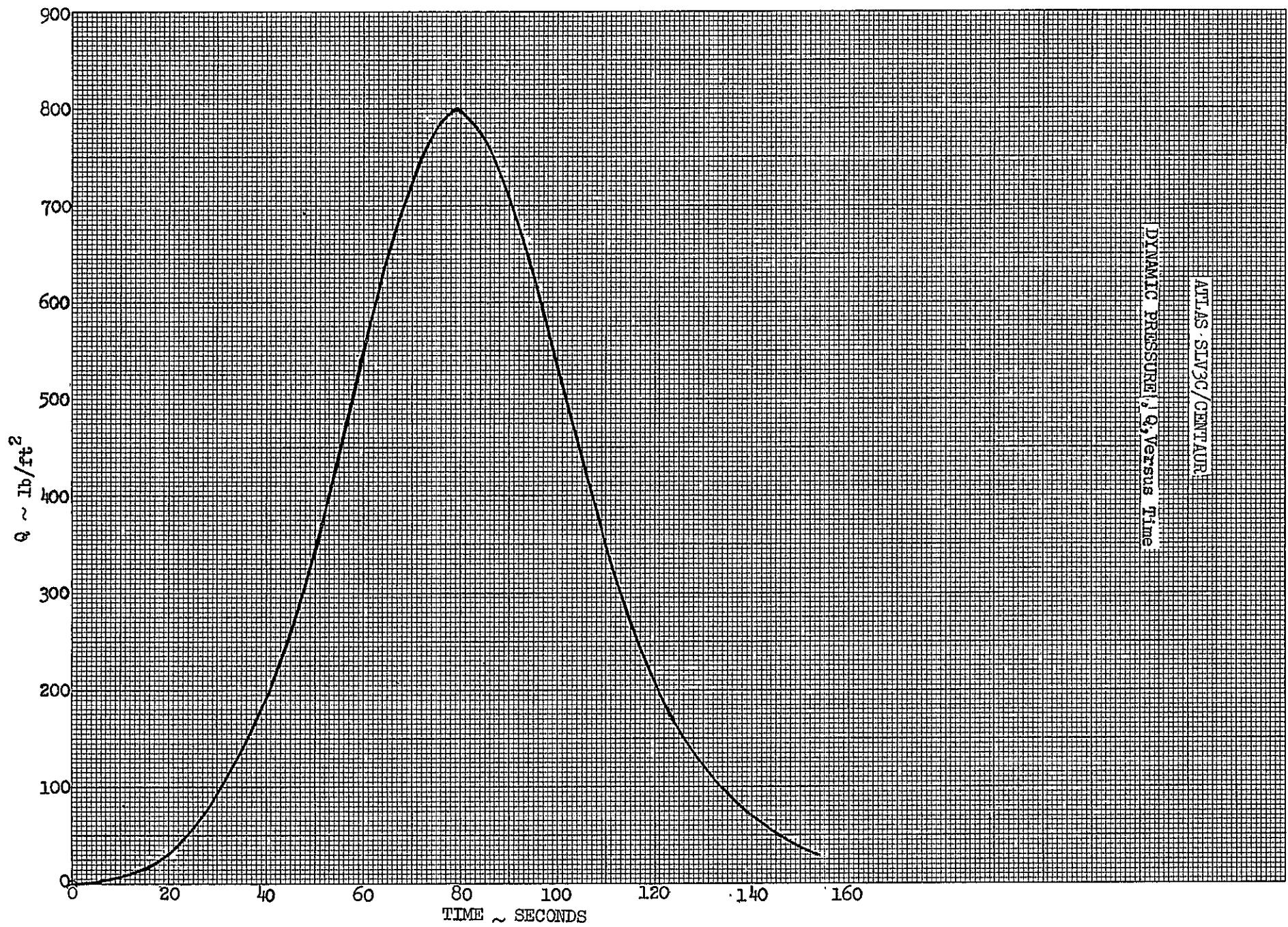


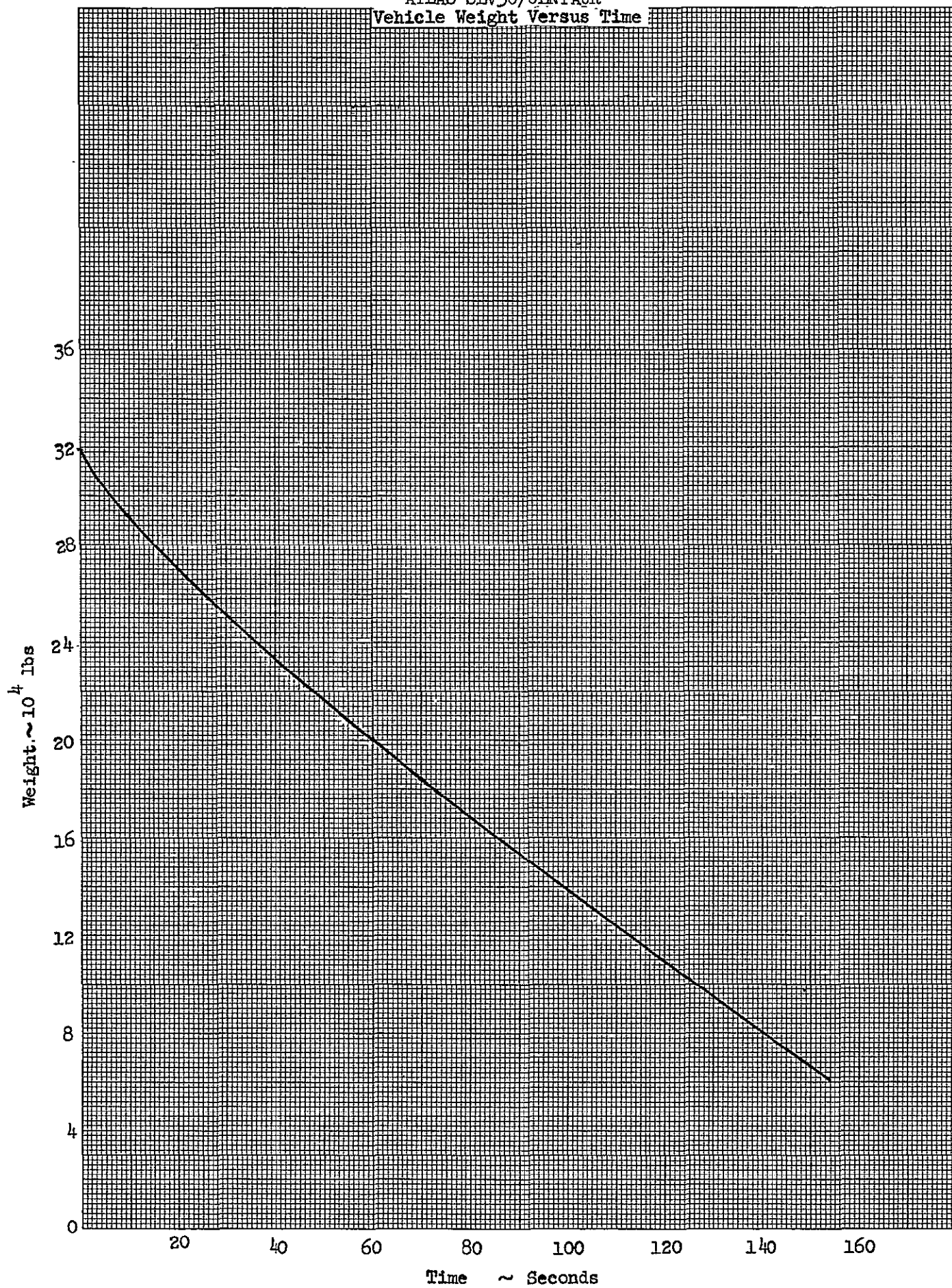
TIME ~ SECONDS

ATLAS SLV 3C/CENTAUR
TOTAL THRUST VERSUS TIME

6

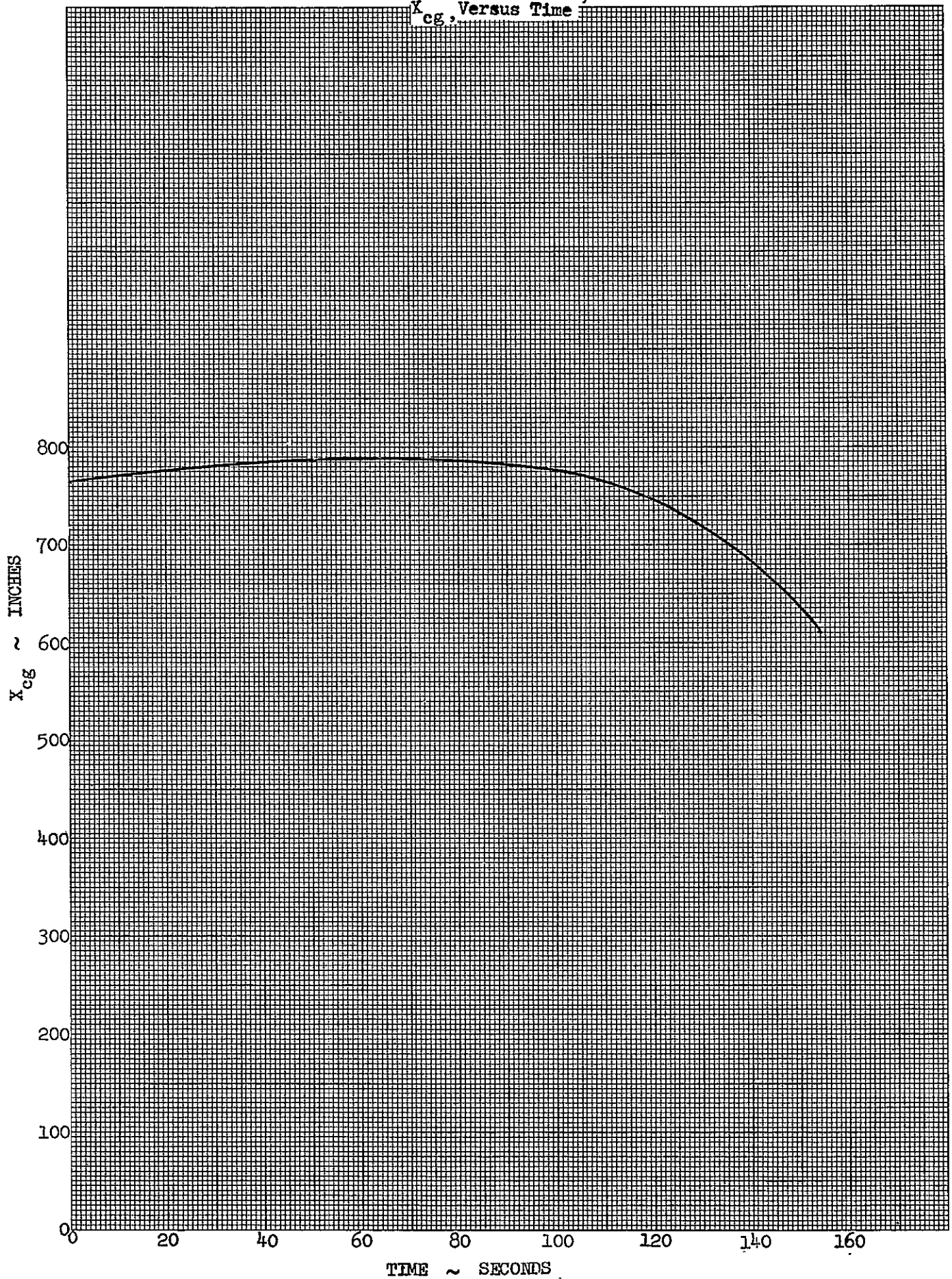




ATLAS SLV3C/CENTAUR
Vehicle Weight Versus Time

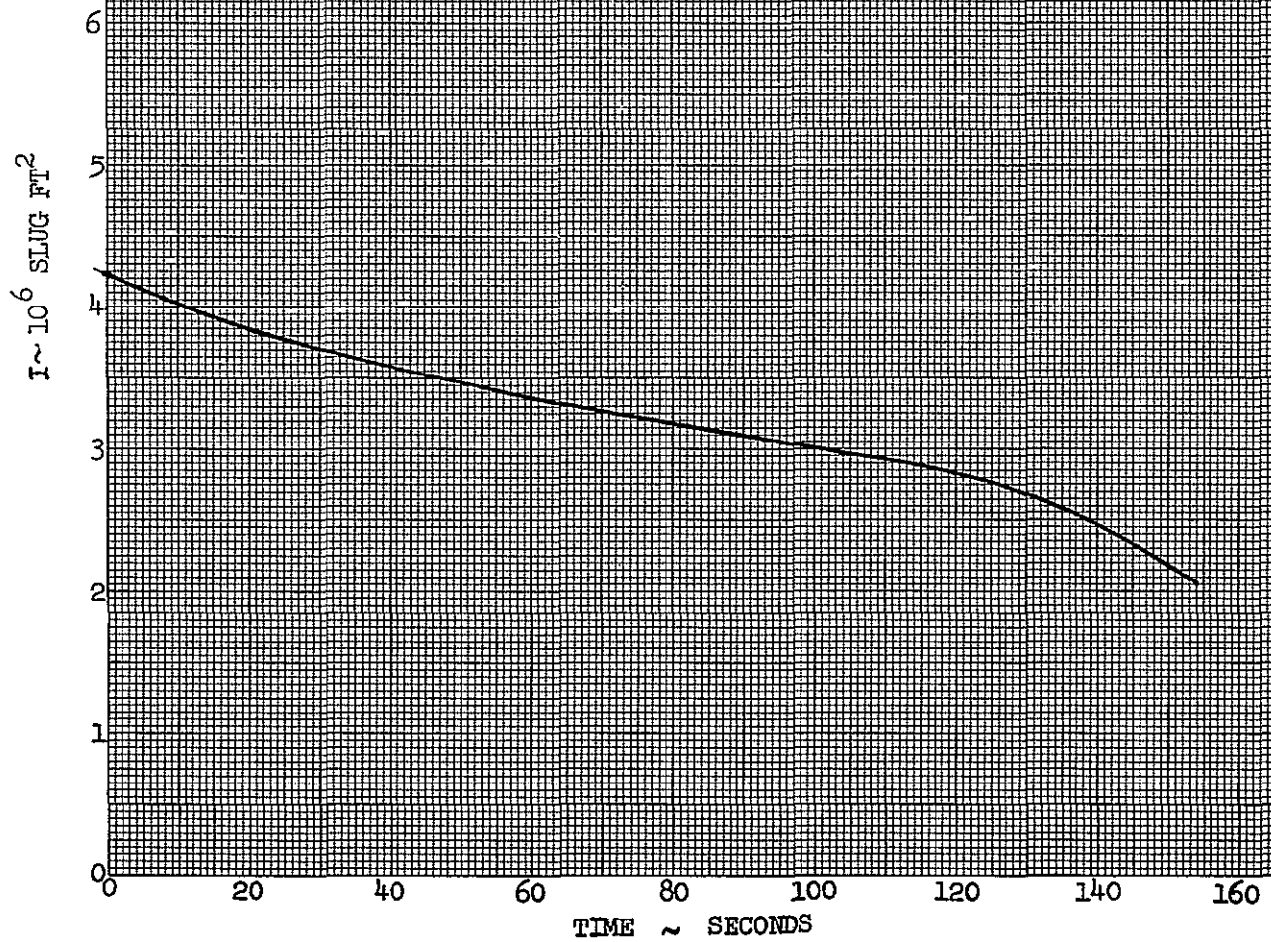
ATLAS SLV3C/CENTAUR,
CENTER OF GRAVITY,
 X_{cg} Versus Time

9

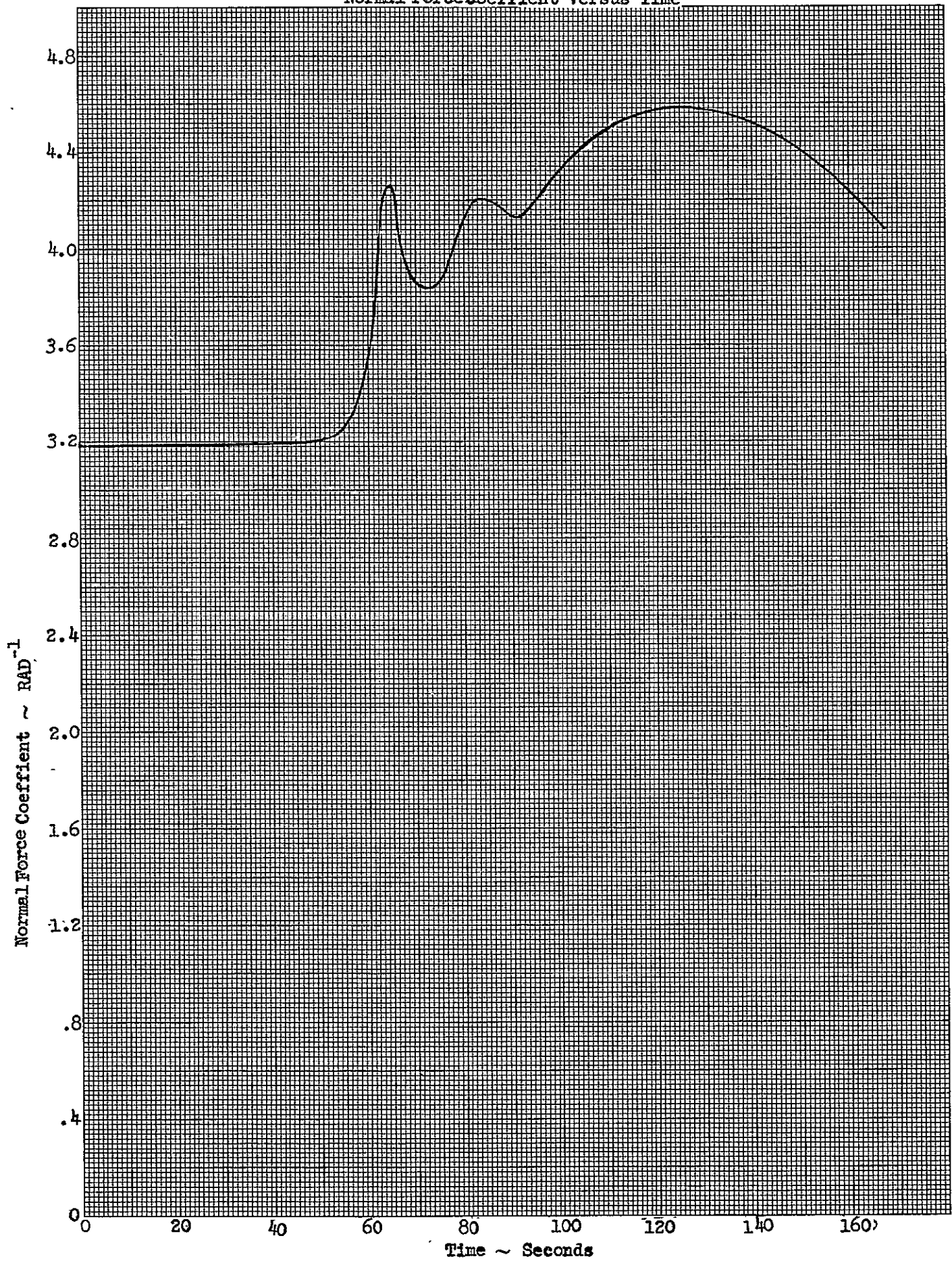


ATLAS SLV3C/CENTAUR
VEHICLE INERTIA,
I, VERSUS TIME

10



Normal Force Coefficient Versus Time

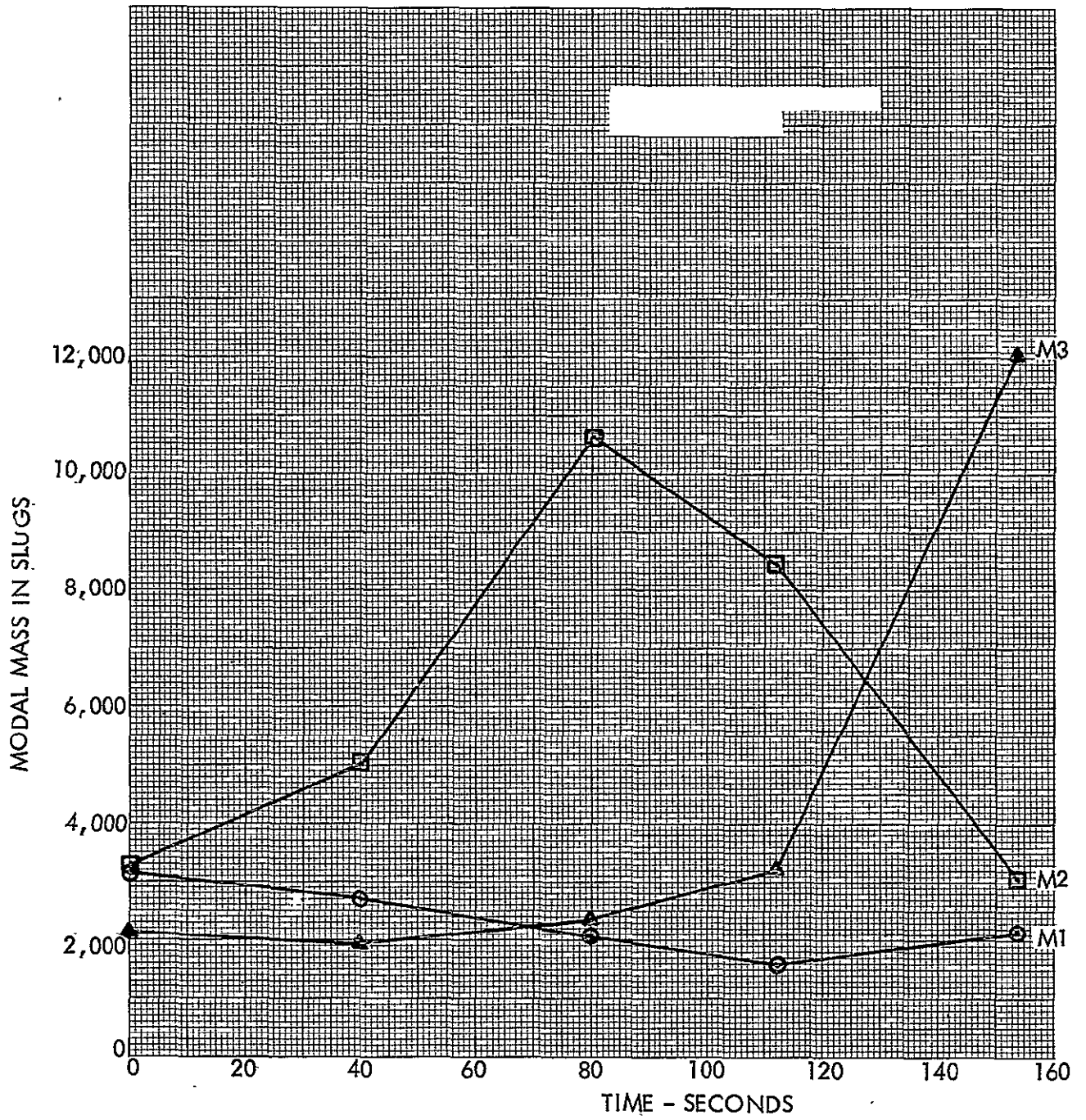


Atlas SLV3C/Centaur,
Center of Pressure Versus Time

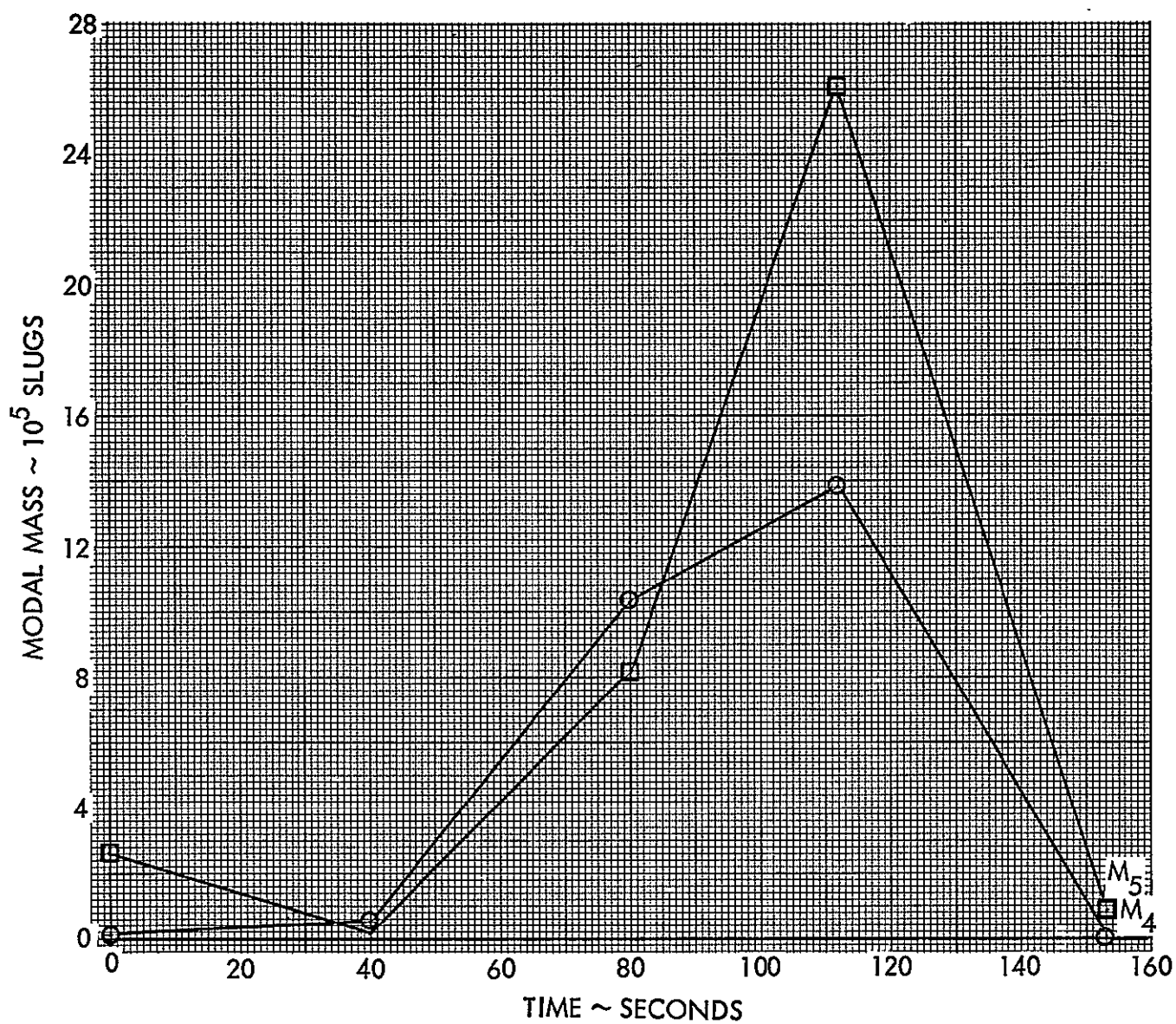
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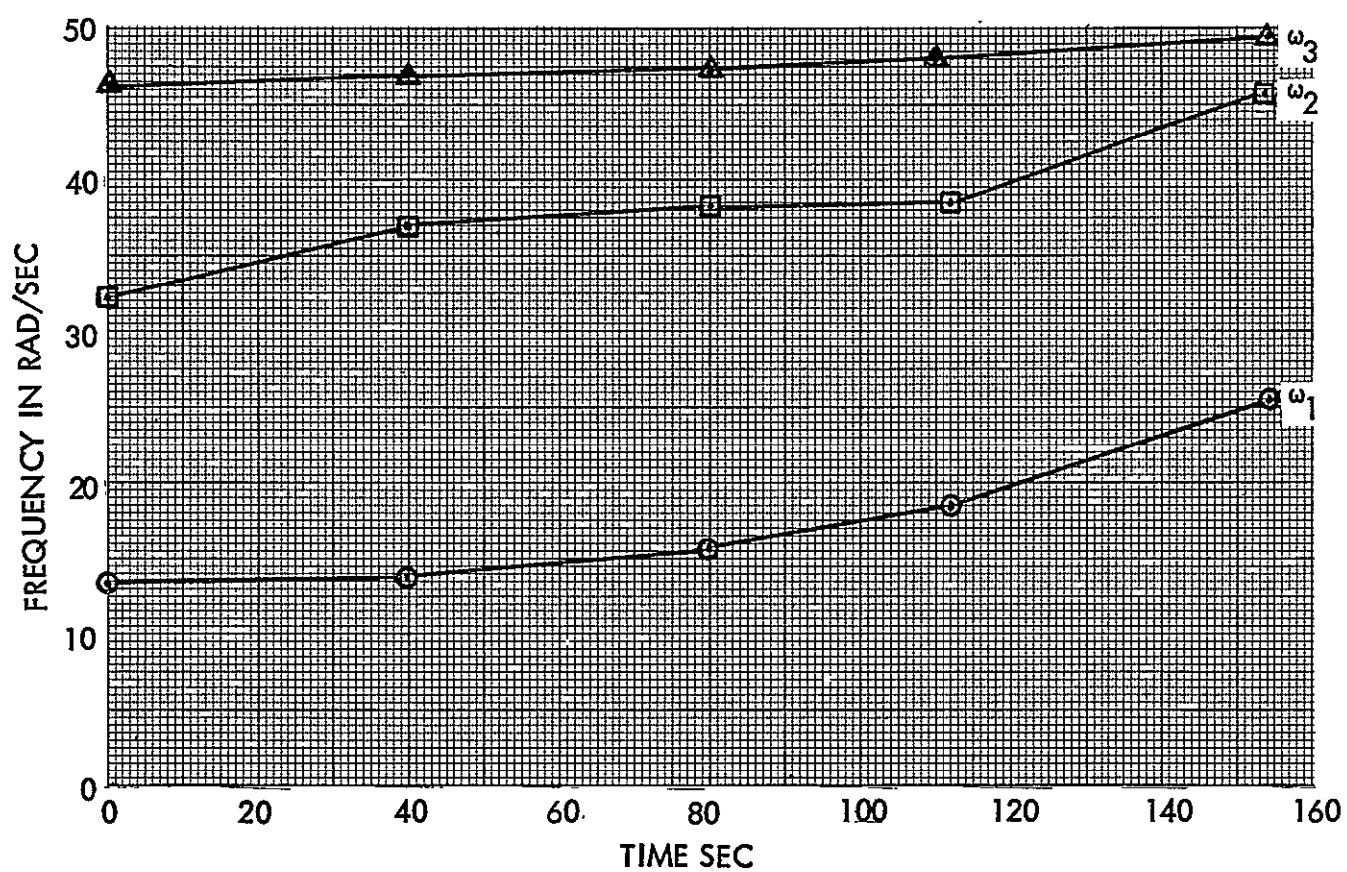
ATLAS SLV3C/CENTAUR, BENDING MODAL MASS VERSUS TIME



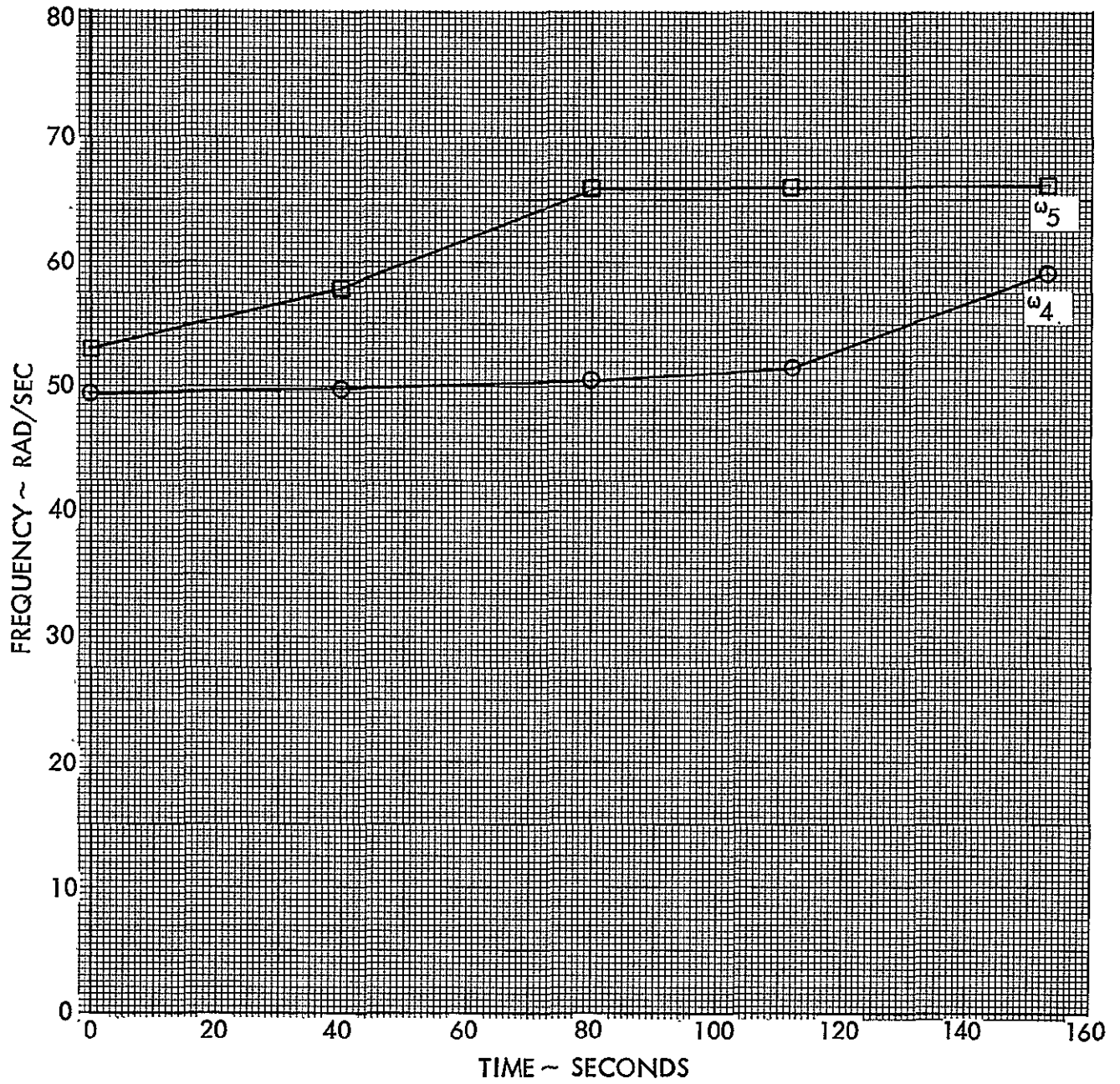
ATLAS SLV3C/CENTAUR, BENDING MODAL MASS VERSUS TIME



ATLAS SLV3C/CENTAUR BENDING MODAL FREQUENCY

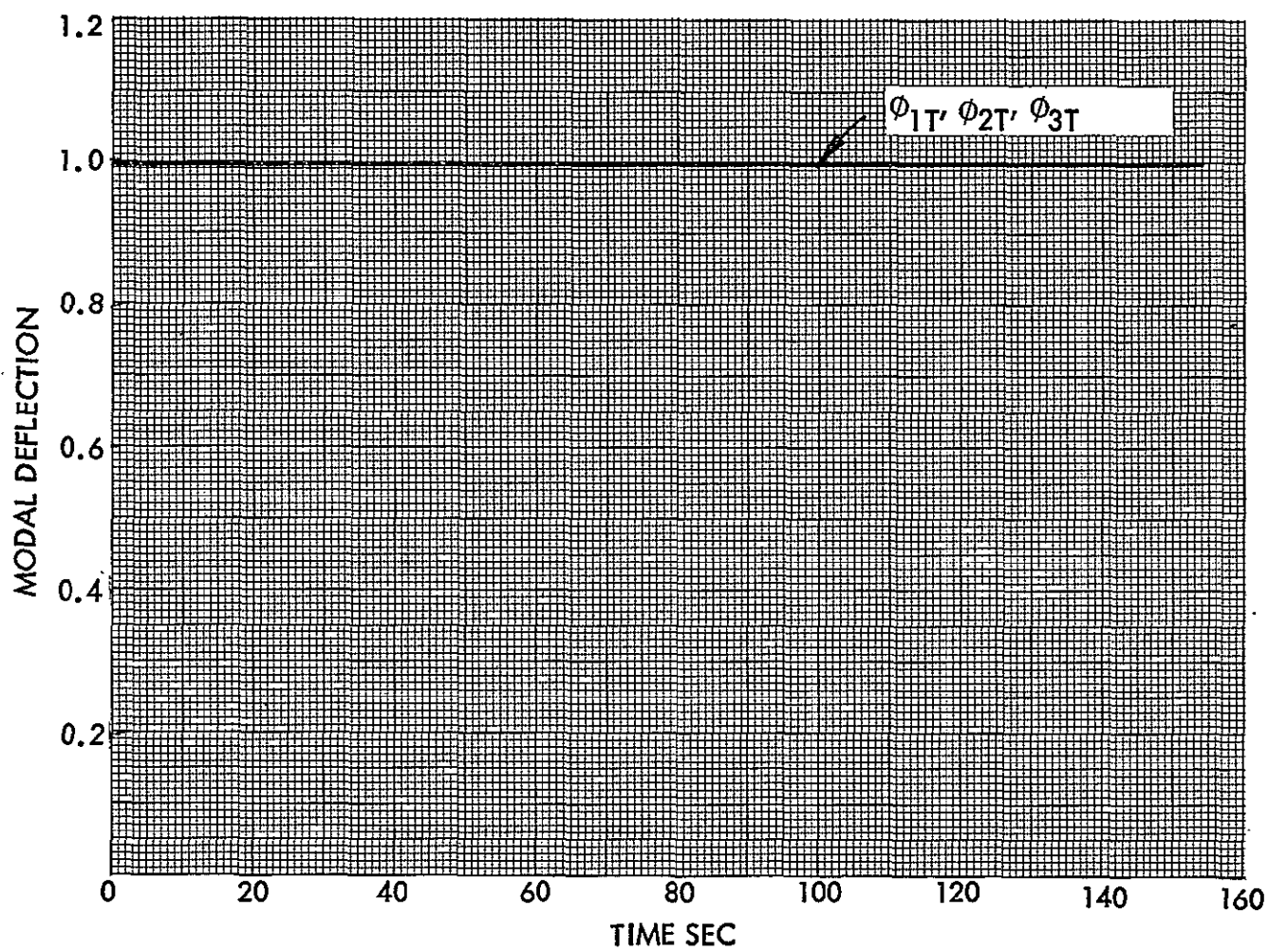
 $(\omega_1, \omega_2, \omega_3)$ VERSUS TIME

ATLAS SLV3C/CENTAUR, BENDING MODE
FREQUENCY (ω_4 , ω_5) VERSUS TIME

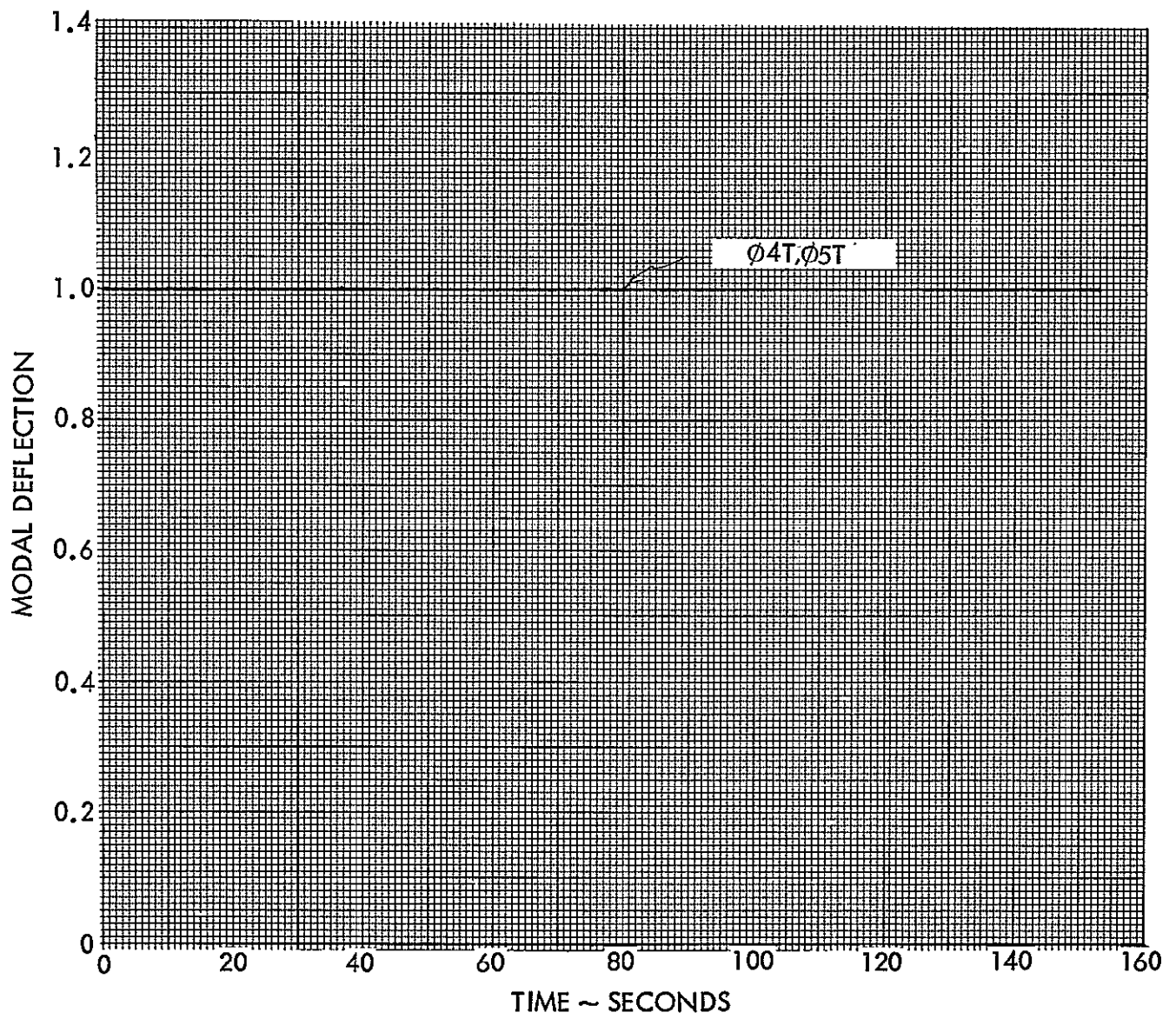


ATLAS SLV3C/CENTAUR, MODAL DEFLECTION AT THE ENGINE GIMBAL

$(\phi_{1T}, \phi_{2T}, \phi_{3T})$ VERSUS TIME
STATION 1212



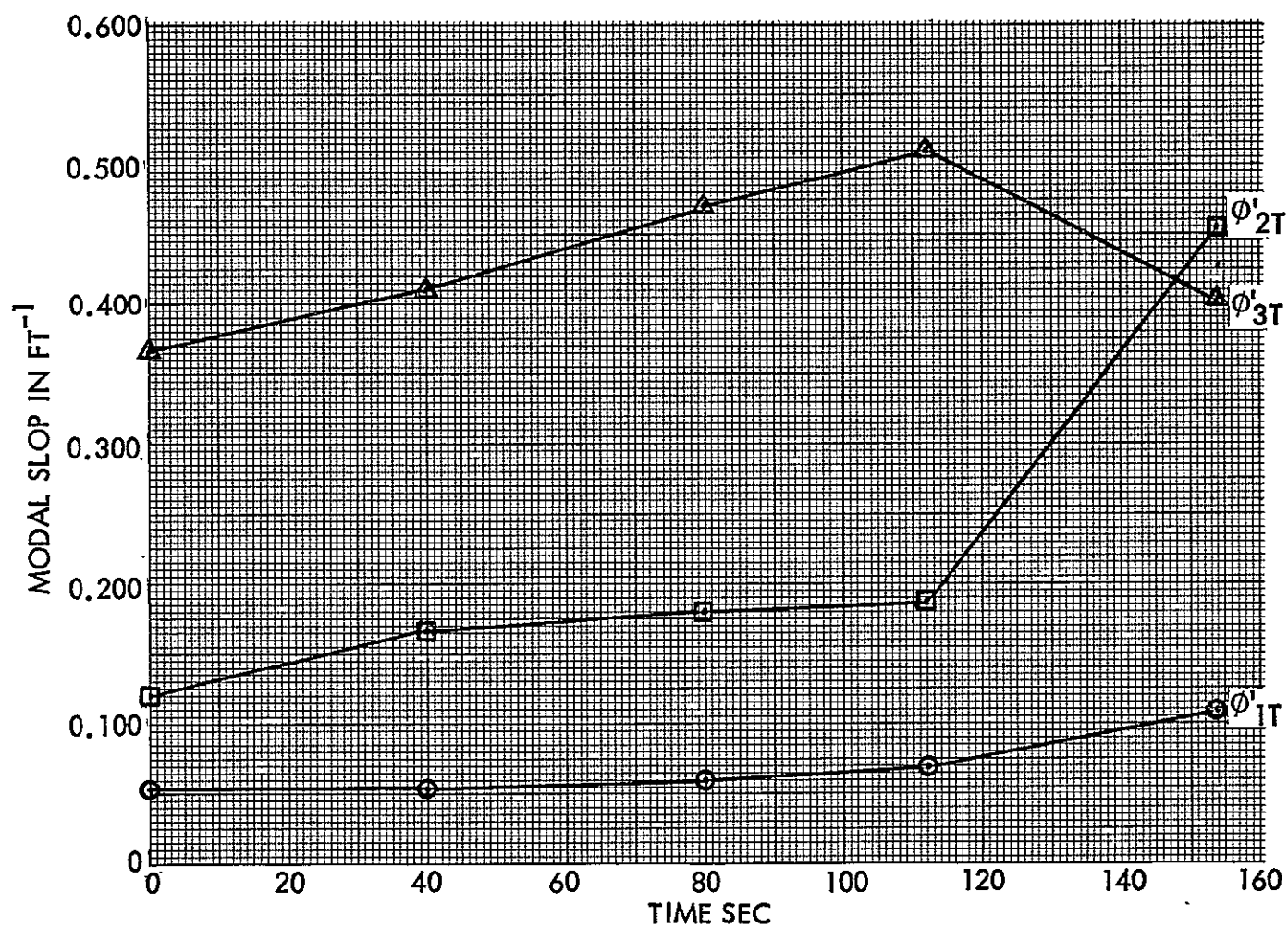
ATLAS SLV3C/CENTAUR, MODAL DEFLECTION AT ENGINE GIMBAL
(ϕ_{4T} , ϕ_{5T}) VERSUS TIME
STATION 1212



ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE ENGINE GIMBAL

 $(\phi'_{1T}, \phi'_{2T}, \phi'_{3T})$ VERSUS TIME

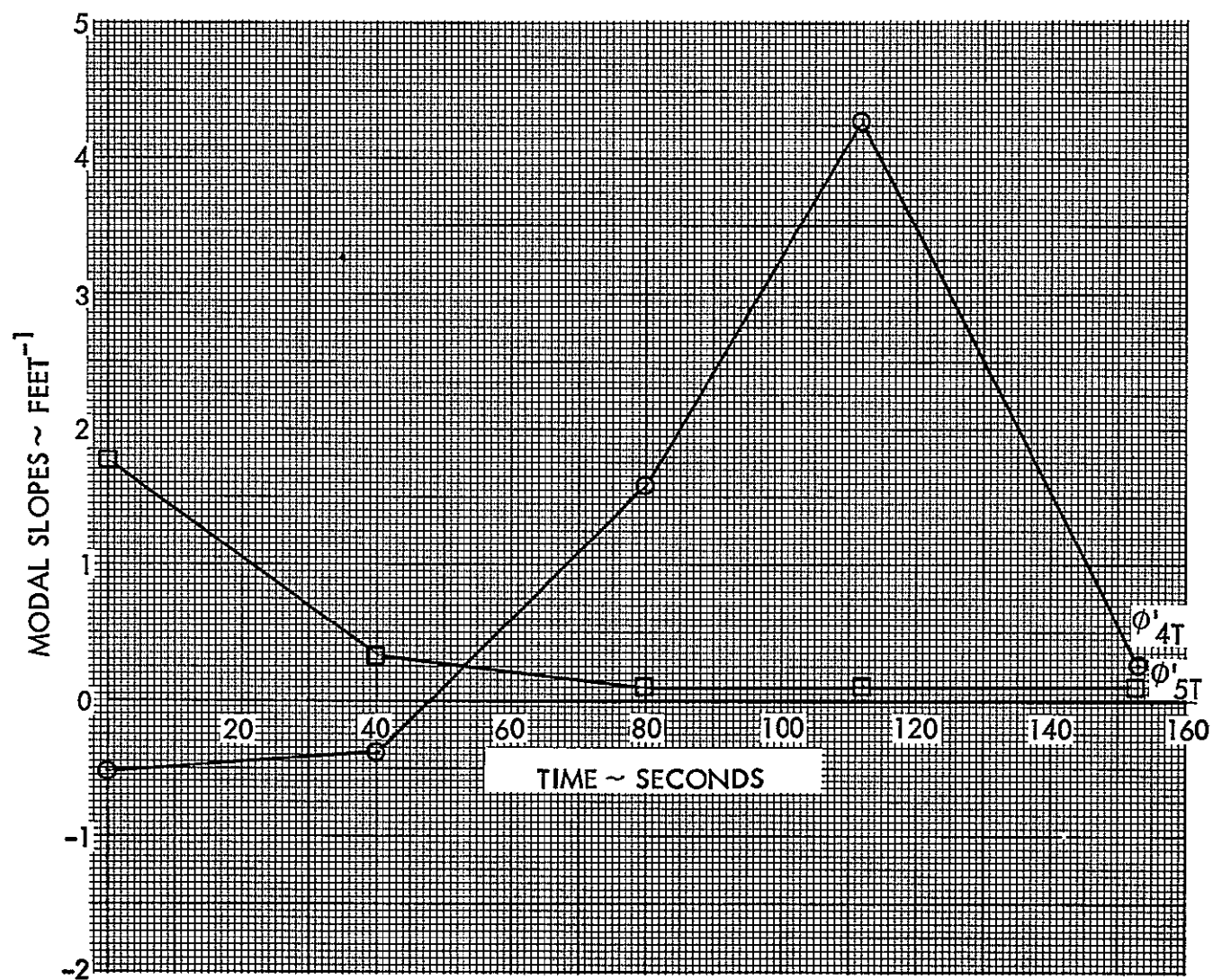
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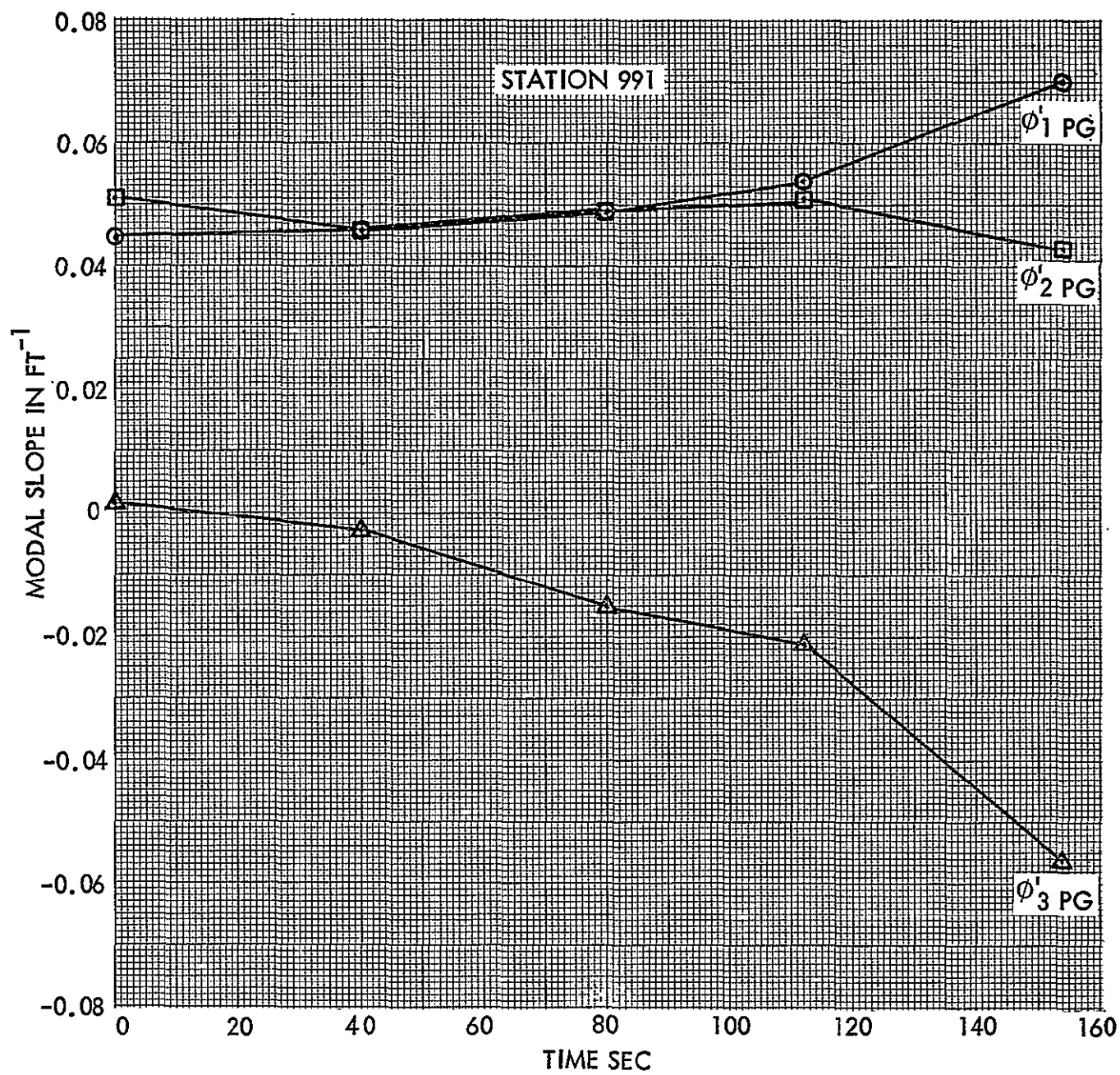
ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE ENGINE GIMBAL

 (ϕ'_{4T}, ϕ'_{5T}) VERSUS TIME

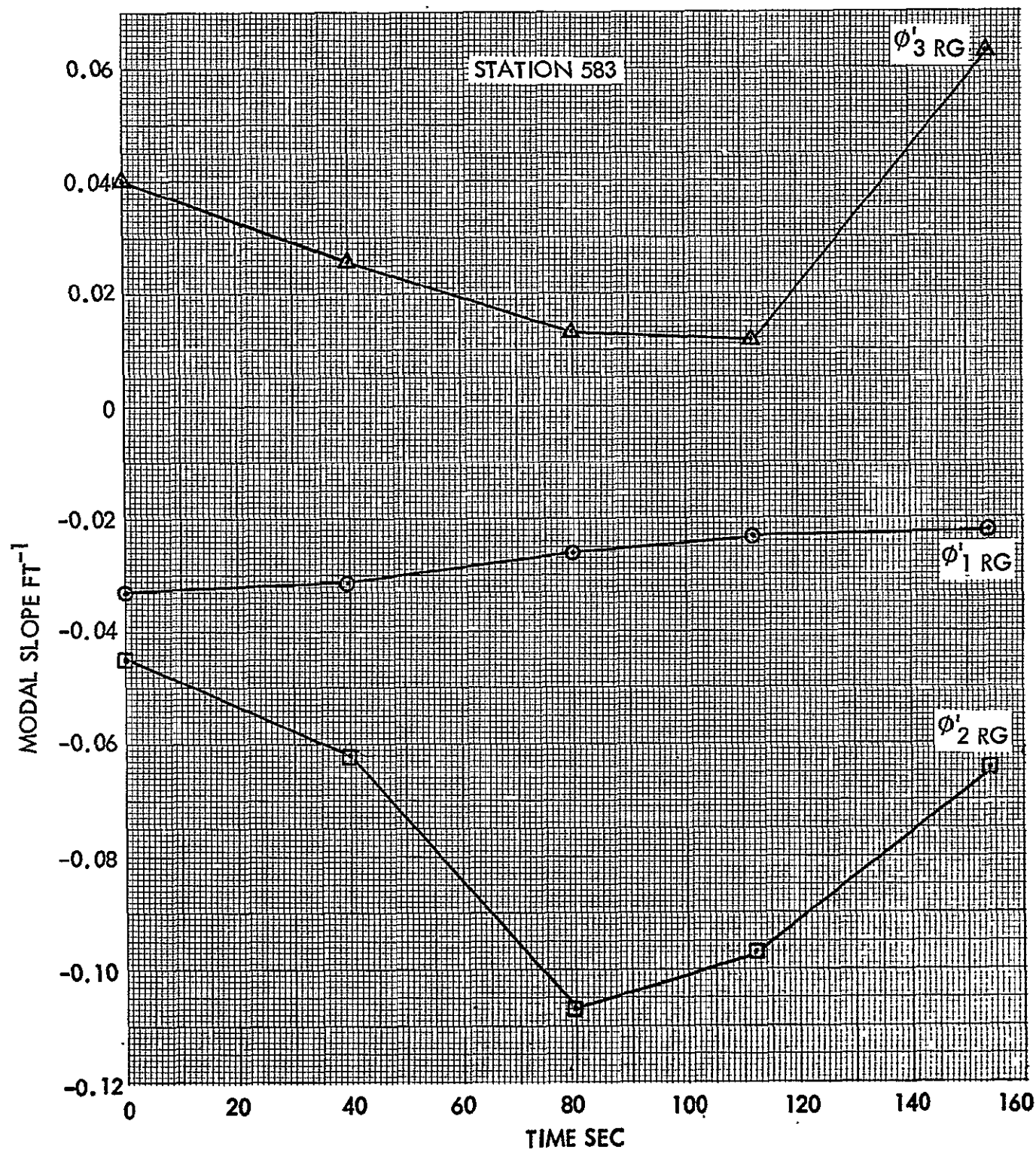
STATION 1212



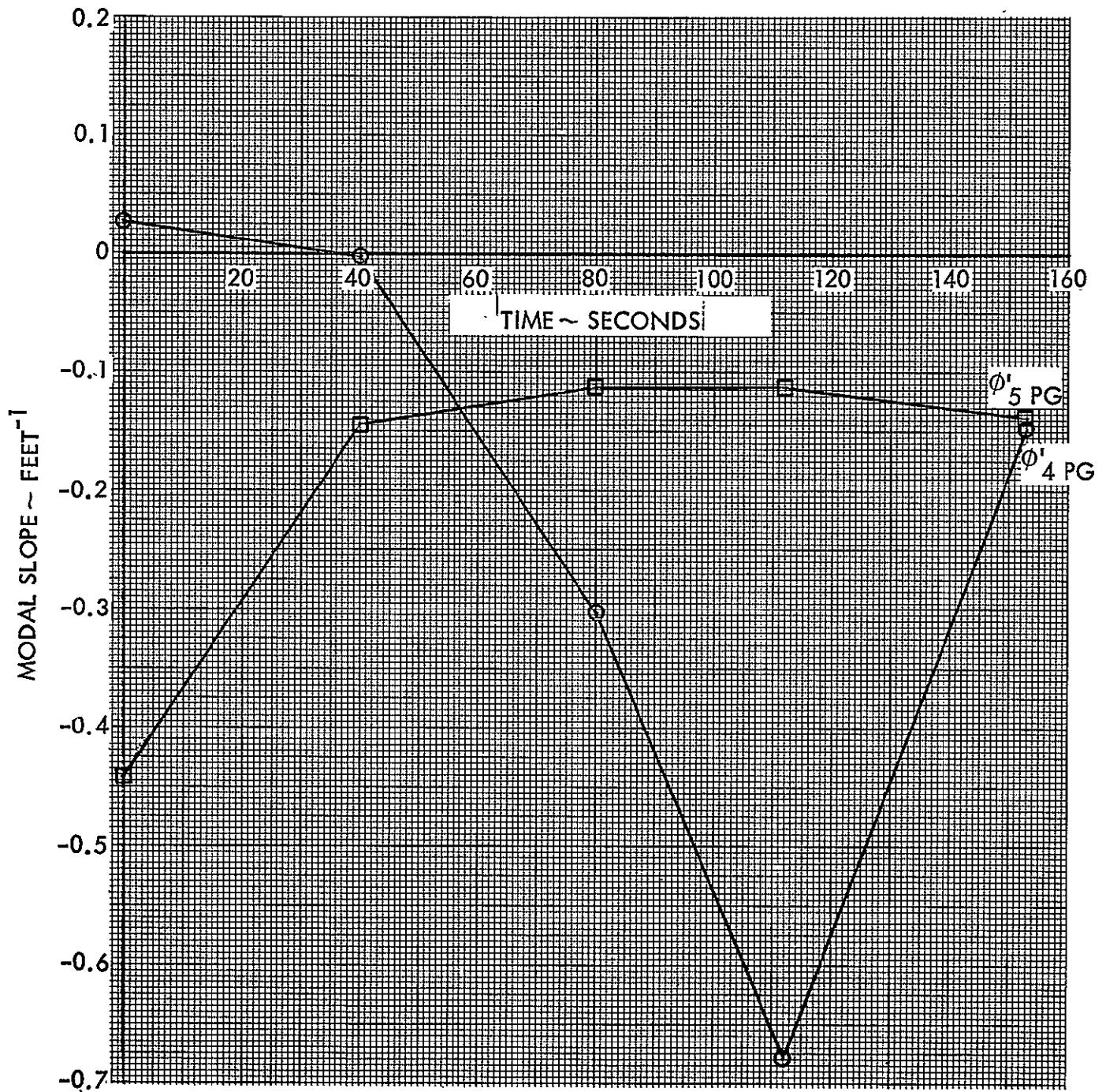
ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE PRESENT GYRO STATION

 $(\phi'_1 PG, \phi'_2 PG, \phi'_3 PG)$ VERSUS TIME

ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE RATE GYRO STATION

 $(\phi'_1 \text{ RG}, \phi'_2 \text{ RG}, \phi'_3 \text{ RG})$ VERSUS TIME

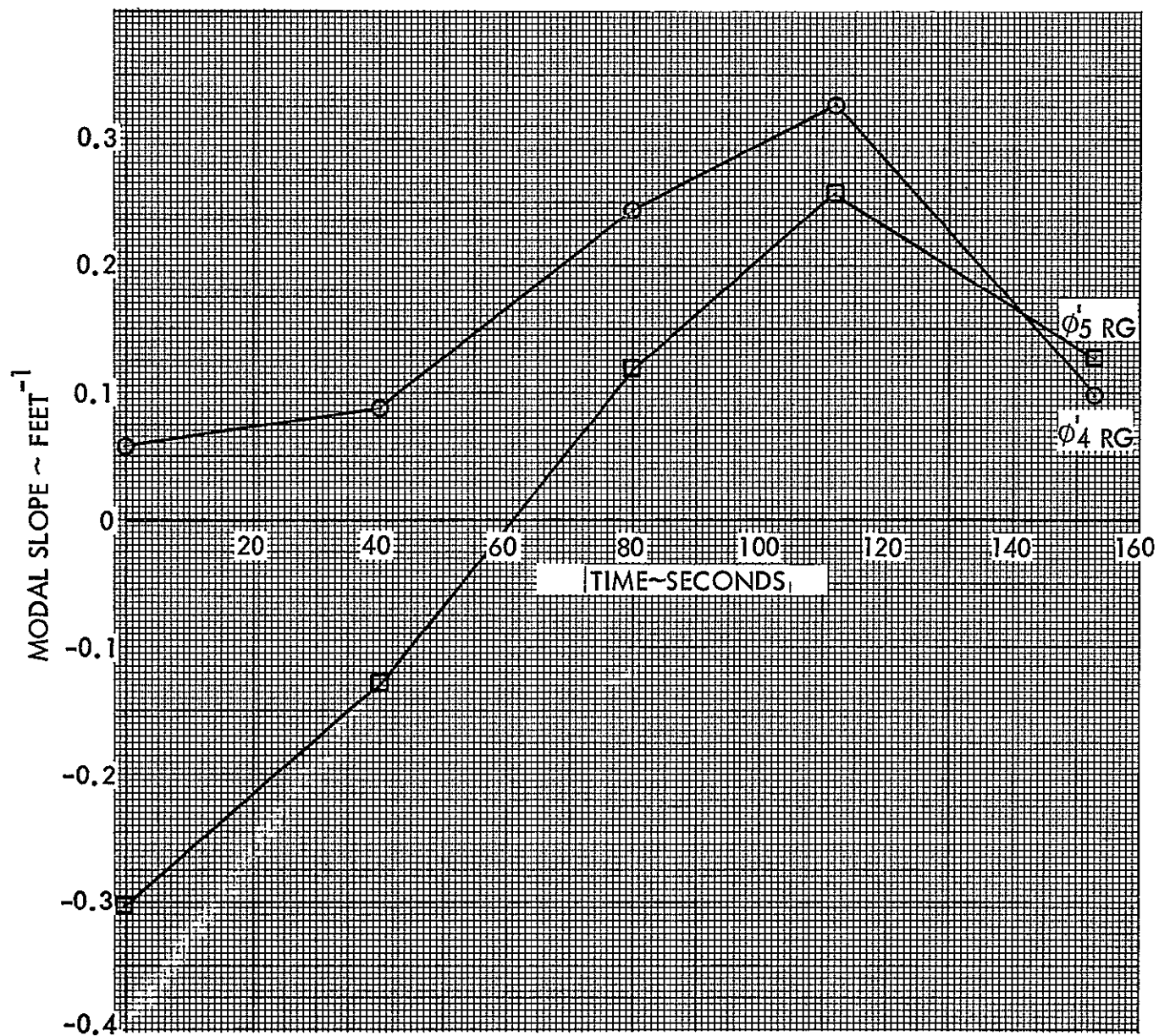
ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE PRESENT GYRO STATION
(ϕ'_4 PG, ϕ'_5 PG) VERSUS TIME
STATION 991



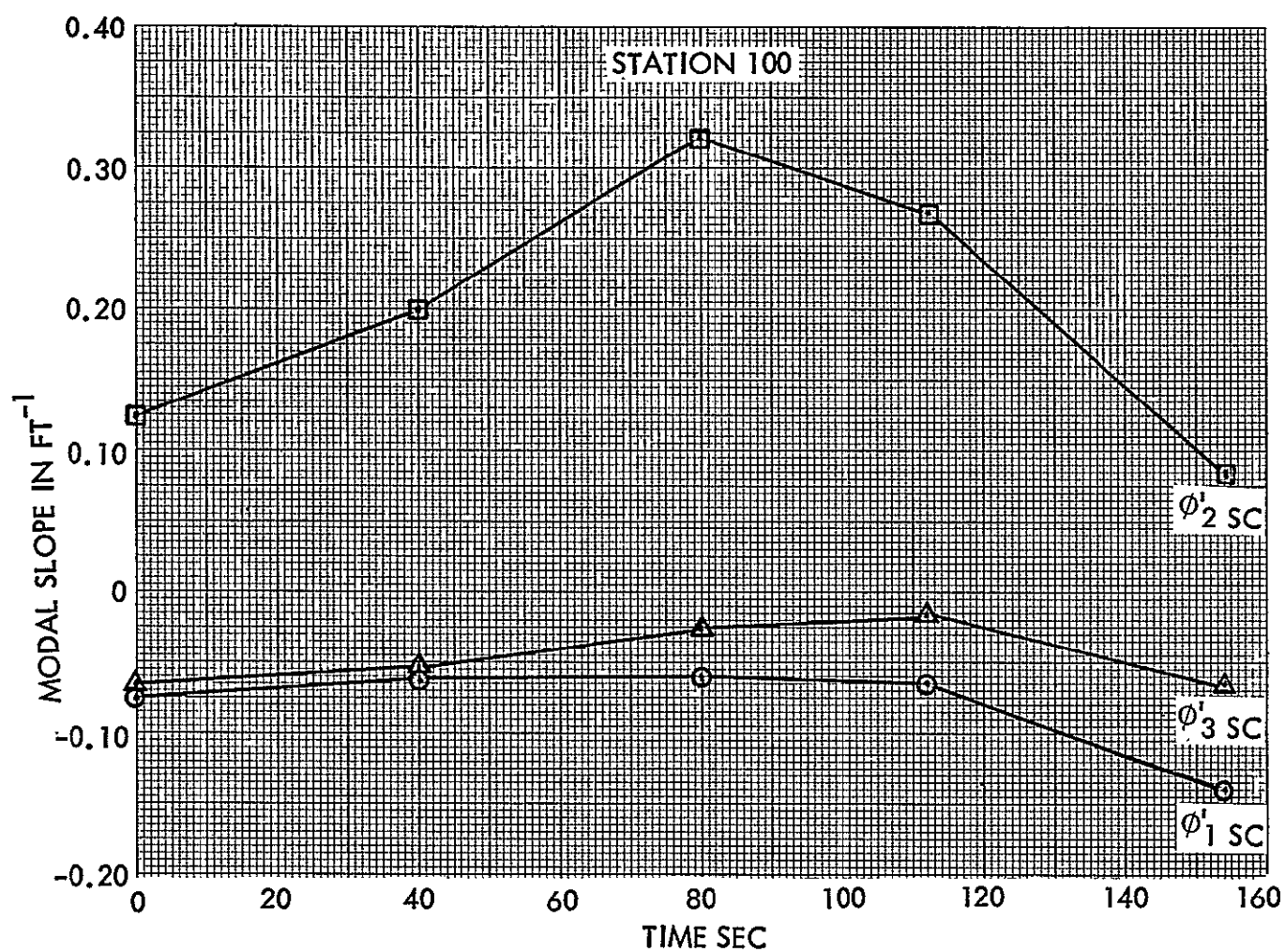
ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE RATE GYRO STATION

 $(\phi_4' \text{ RG}, \phi_5' \text{ RG})$ VERSUS TIME

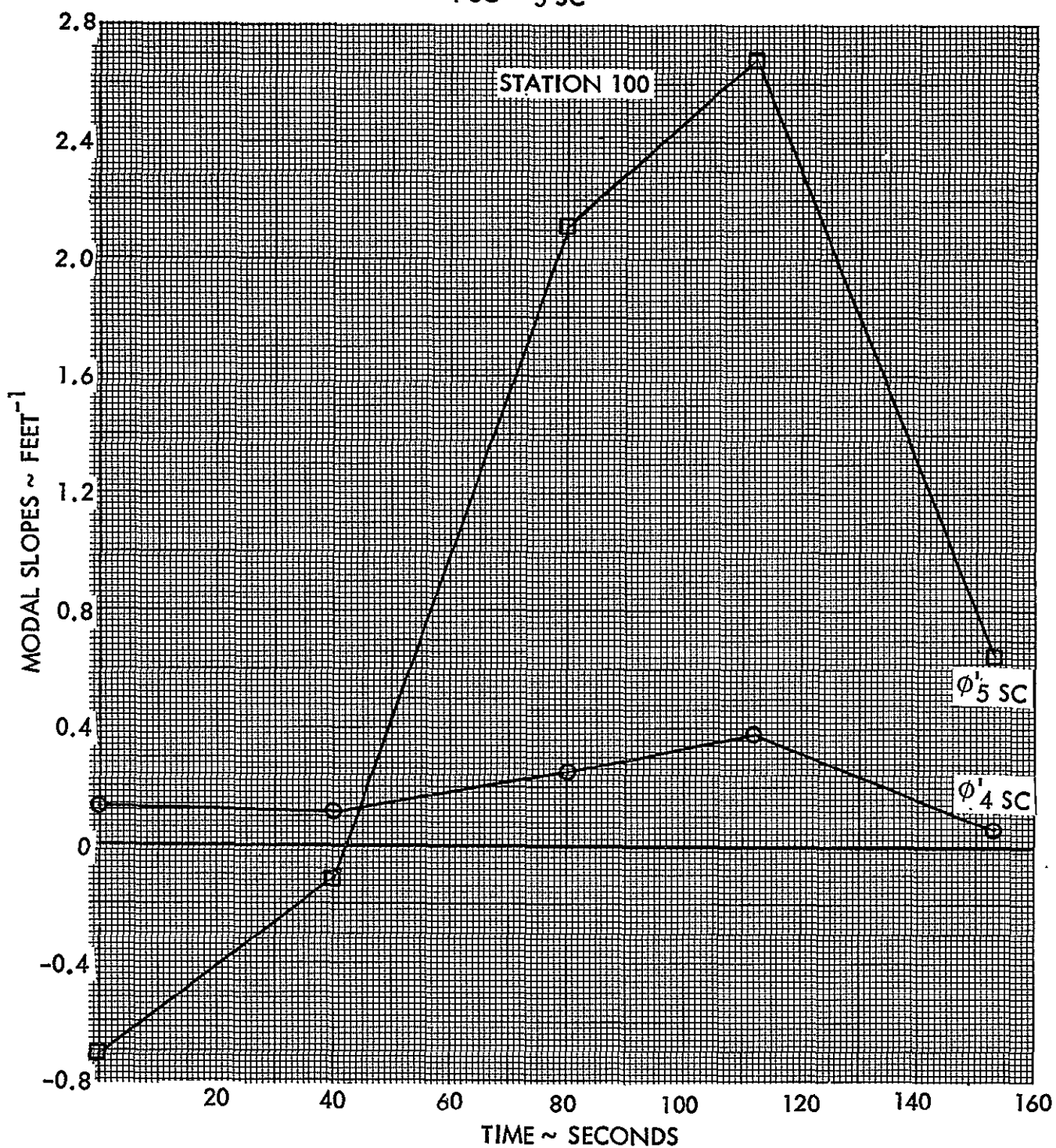
STATION 583

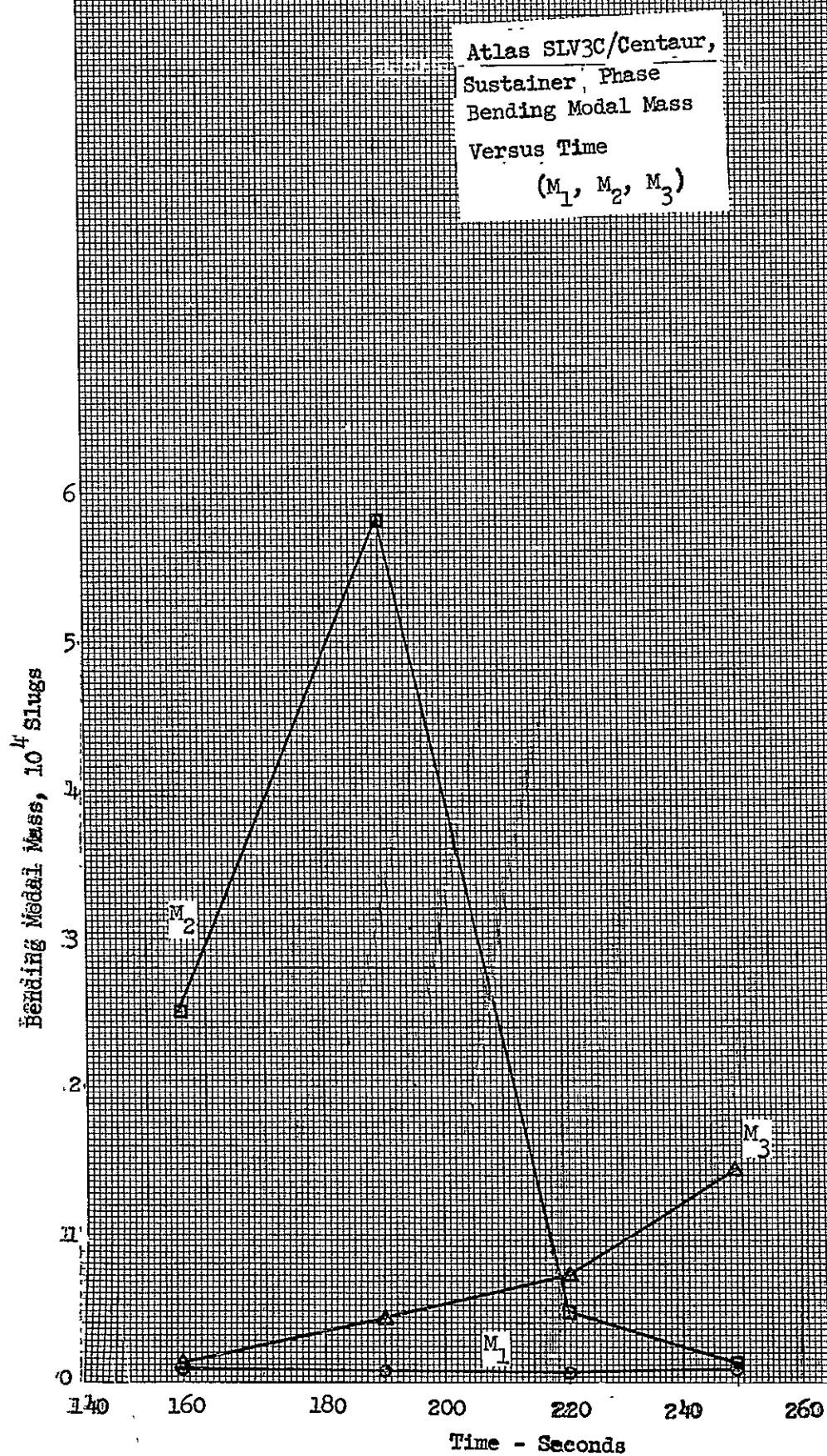


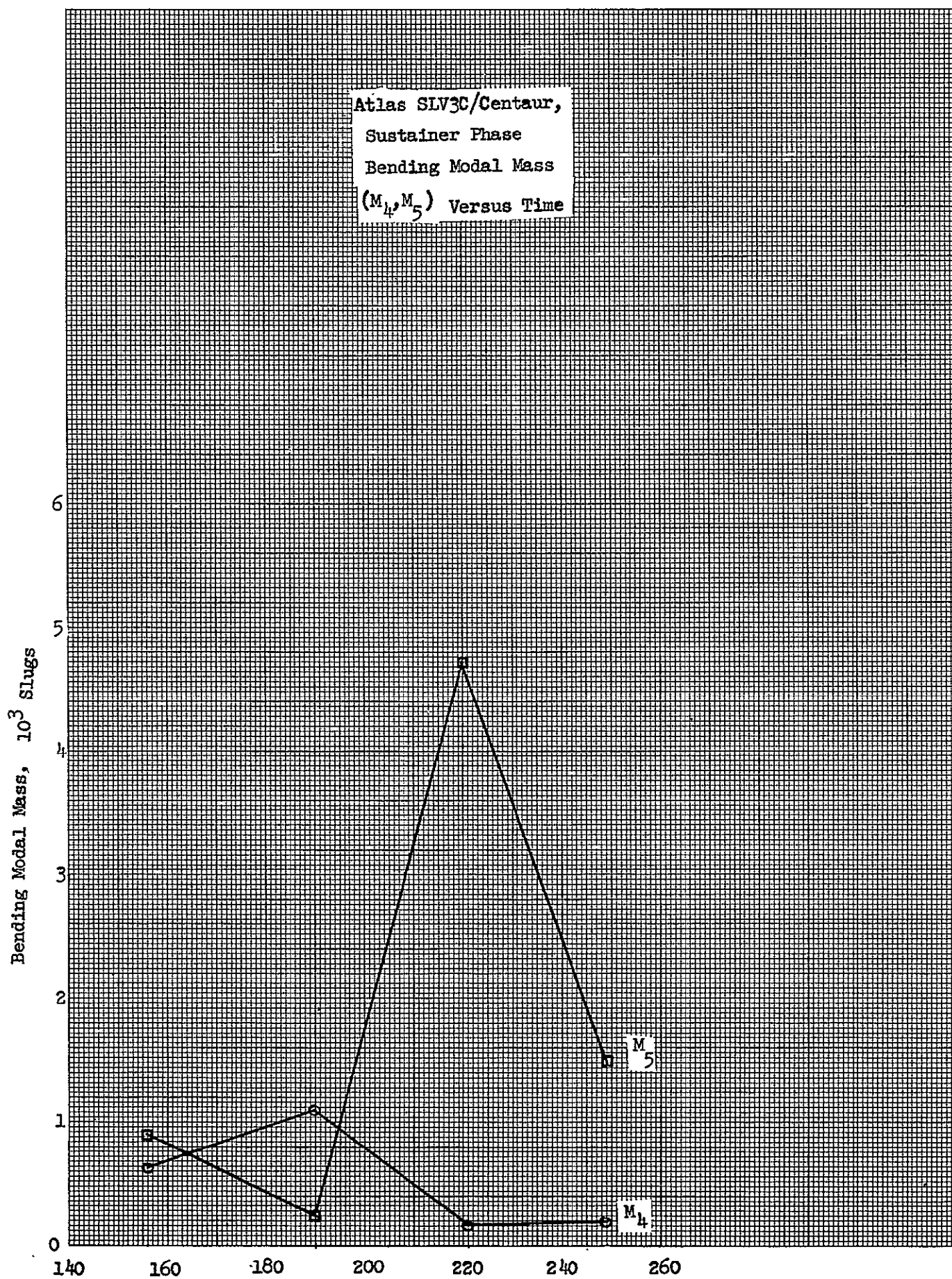
ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE SPACECRAFT
(ϕ'_1 SC, ϕ'_2 SC, ϕ'_3 SC) VERSUS TIME



ATLAS SLV3C/CENTAUR, MODAL SLOPE AT THE SPACECRAFT
(ϕ'_4 SC, ϕ'_5 SC) VERSUS TIME

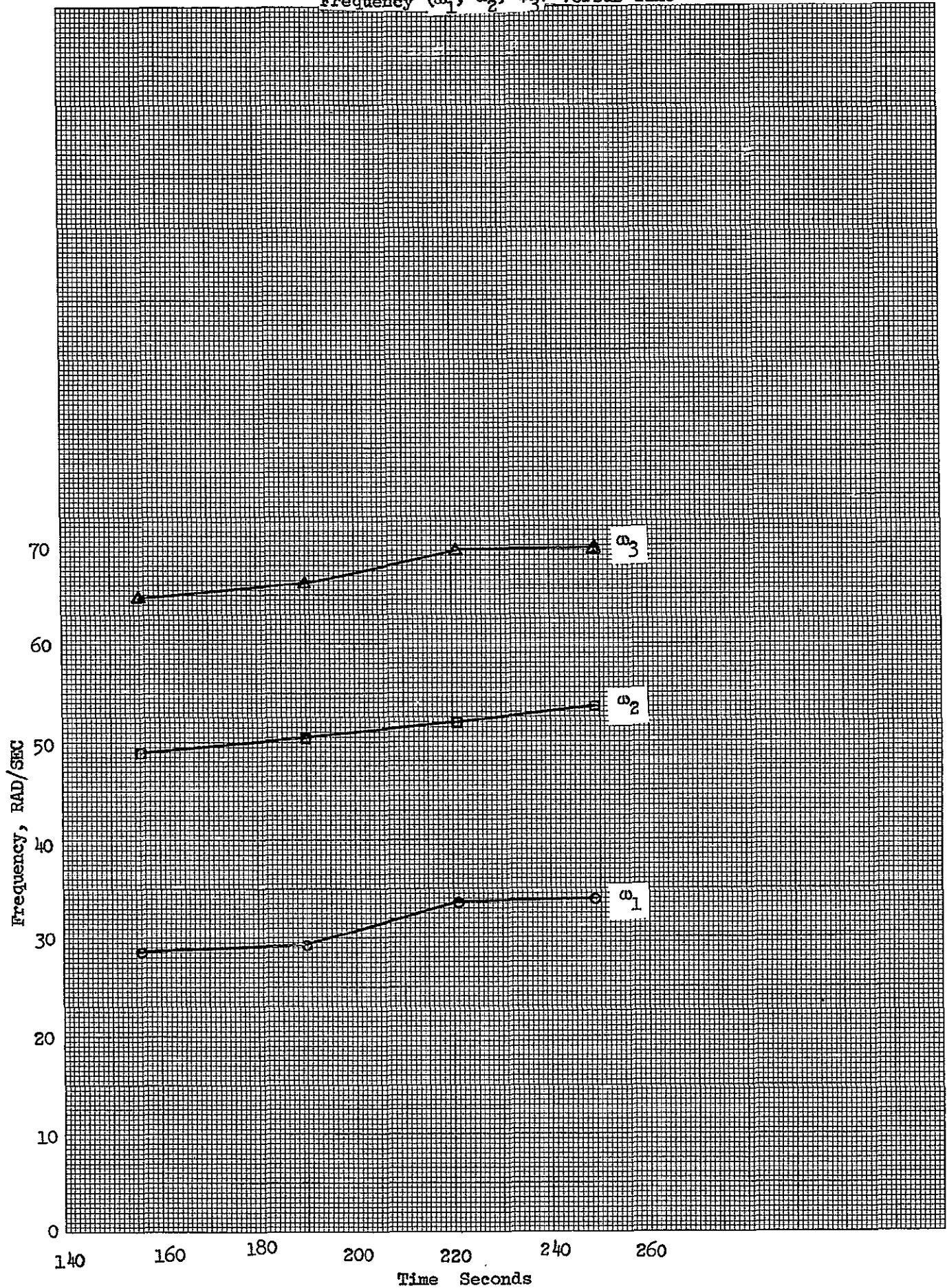






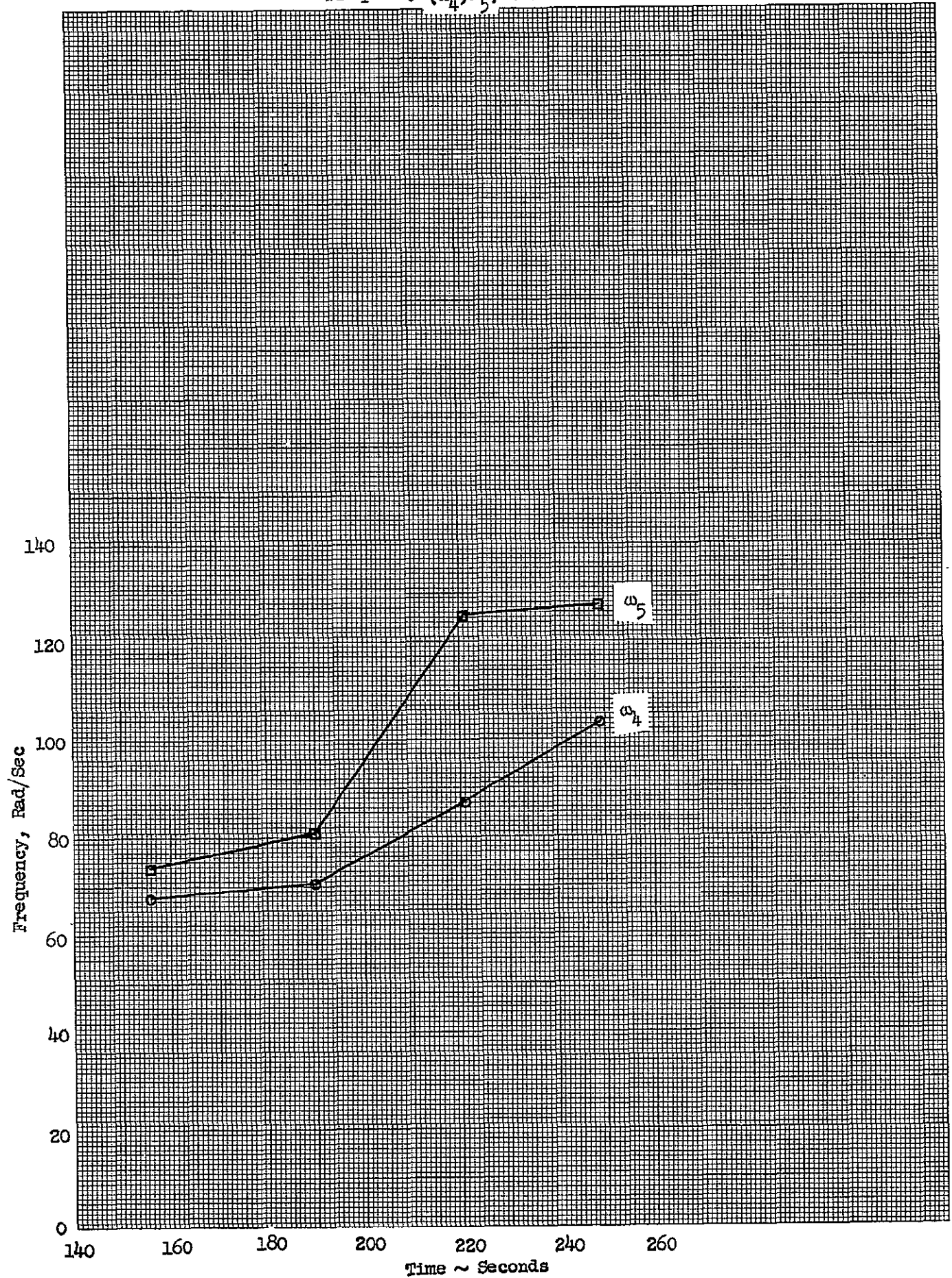
Atlas SLV3C/Centaur, Sustainer Phase
Frequency (ω_1 , ω_2 , ω_3) Versus Time

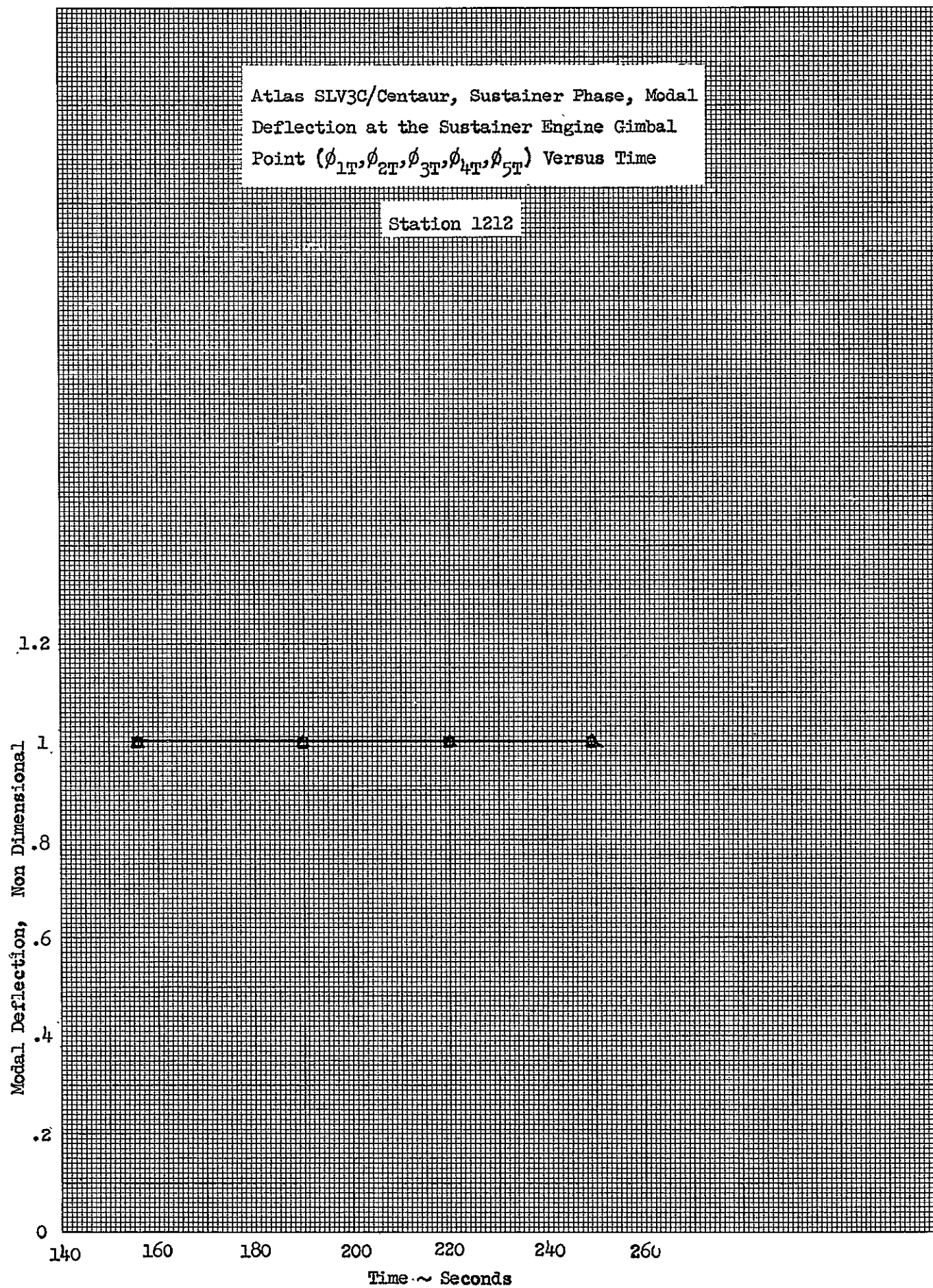
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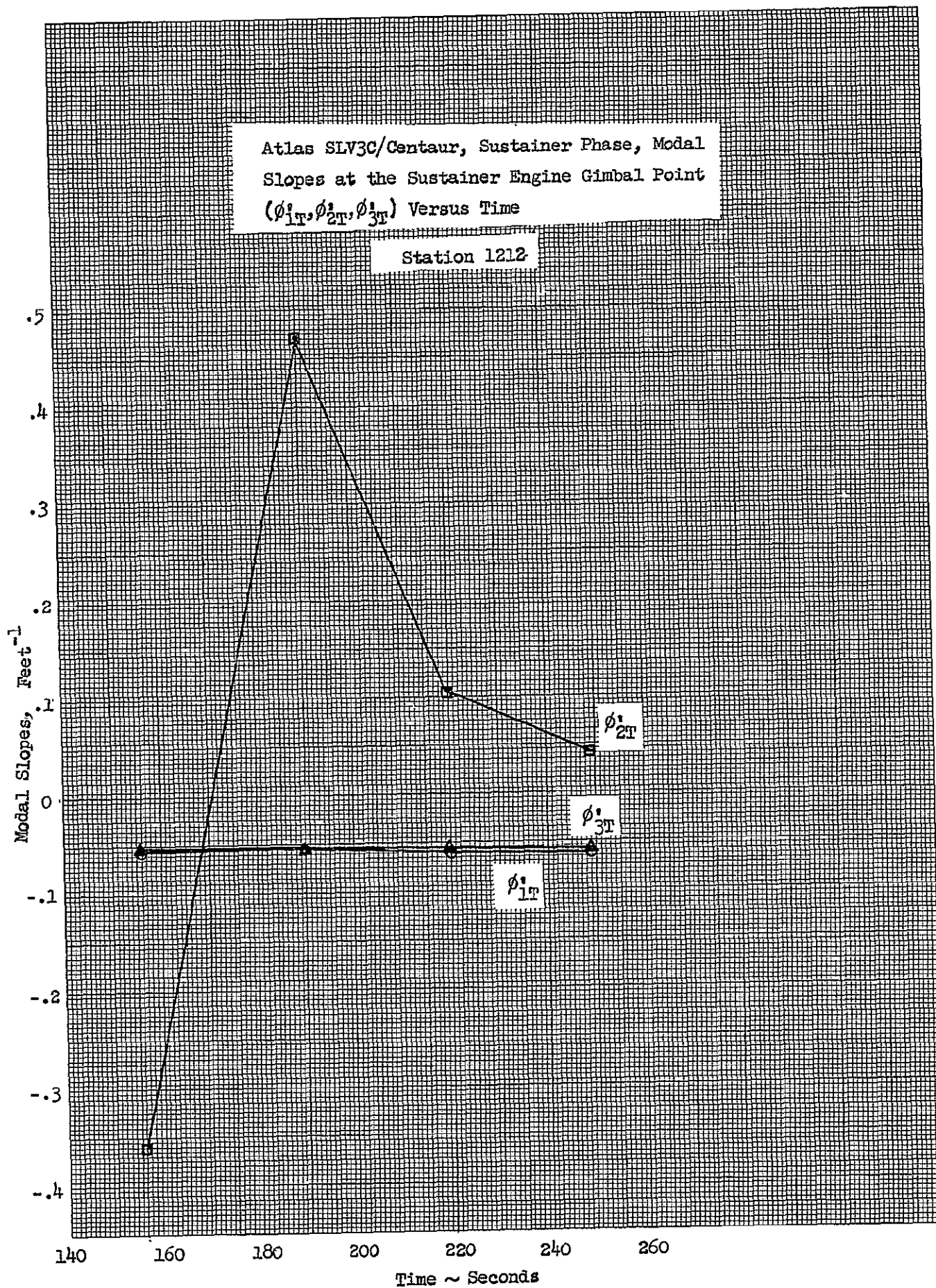


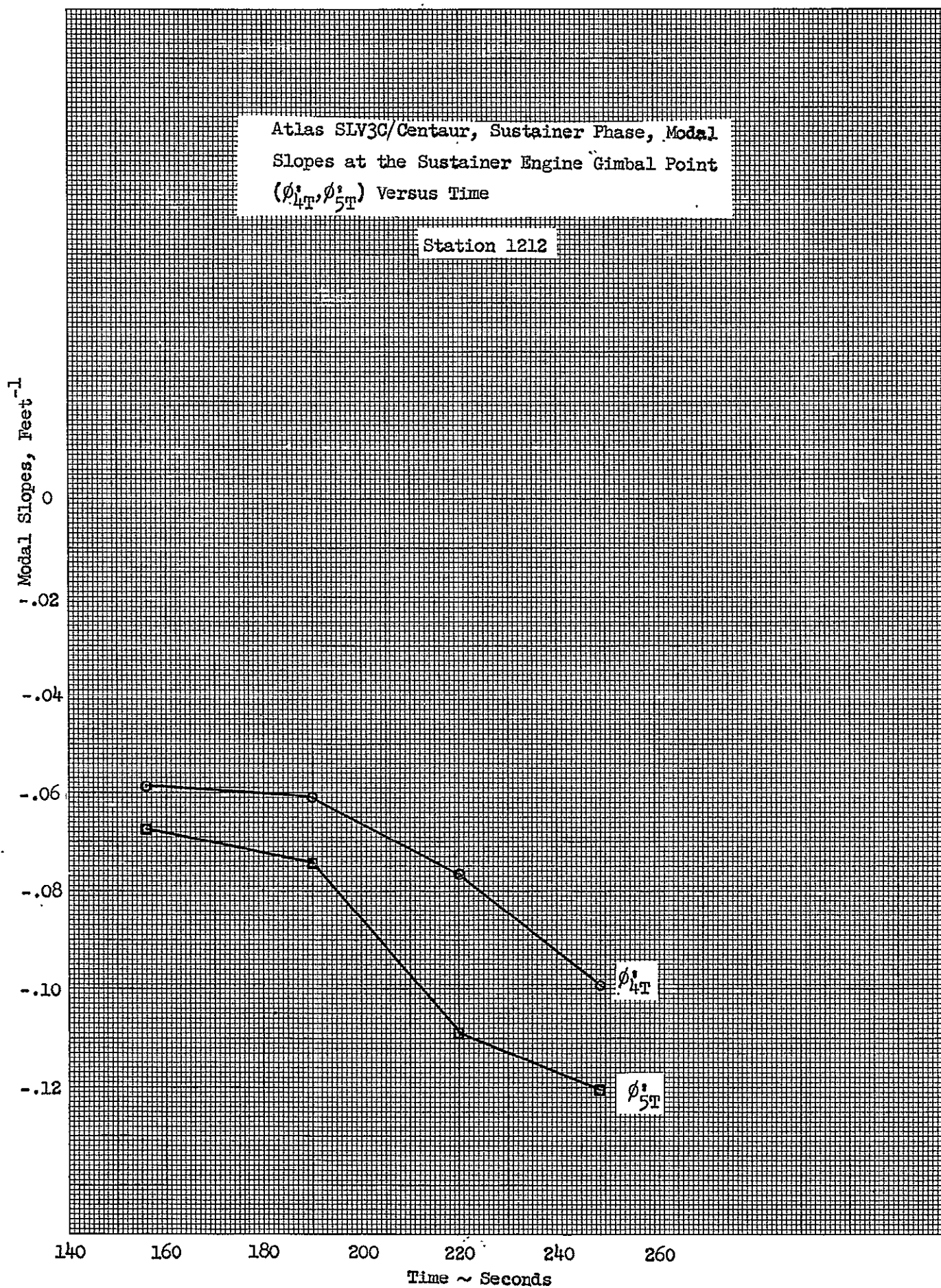
Atlas SLV30/Centaur, Sustainer Phase,
Frequency (ω_4, ω_5) Versus Time

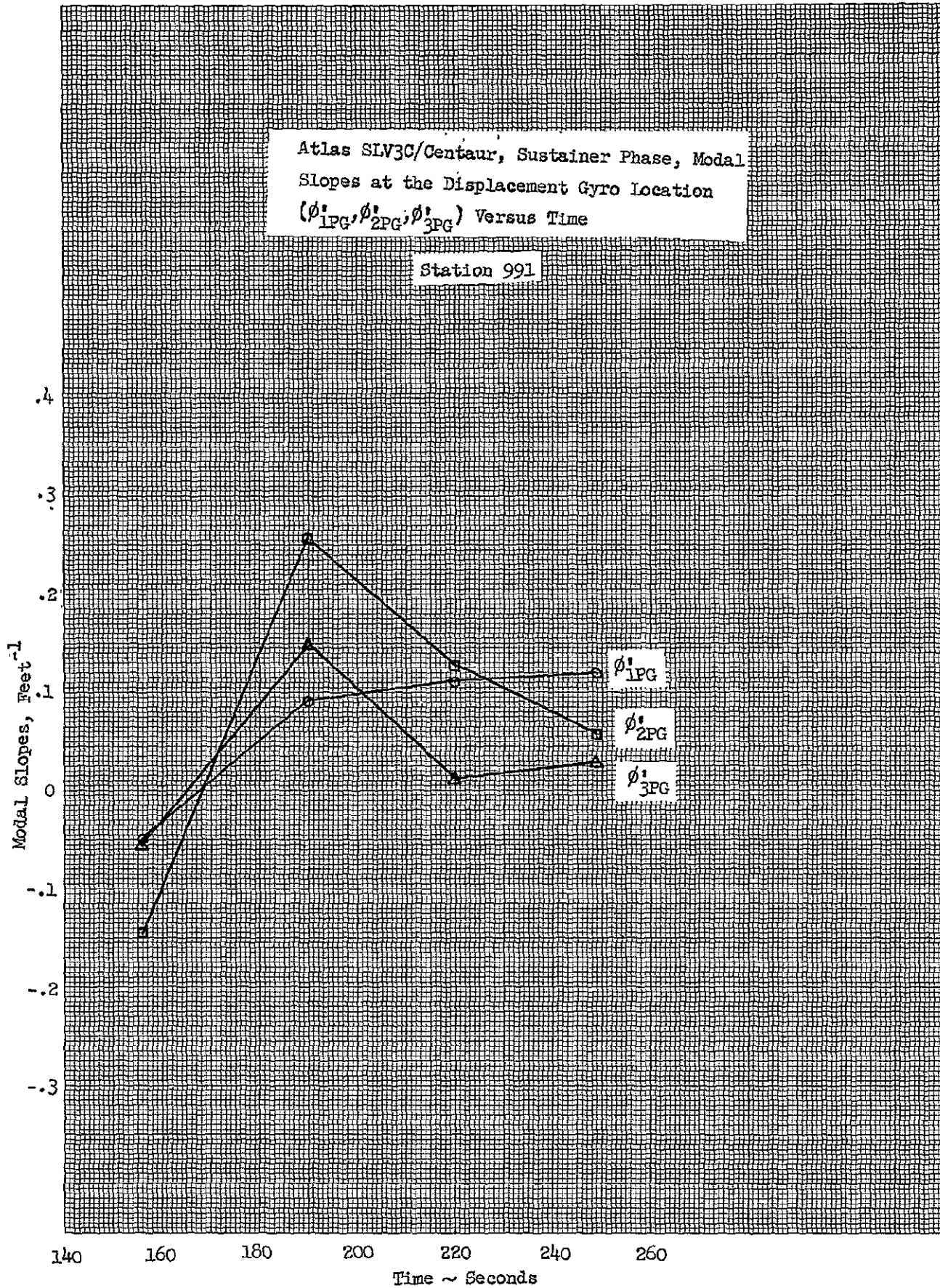
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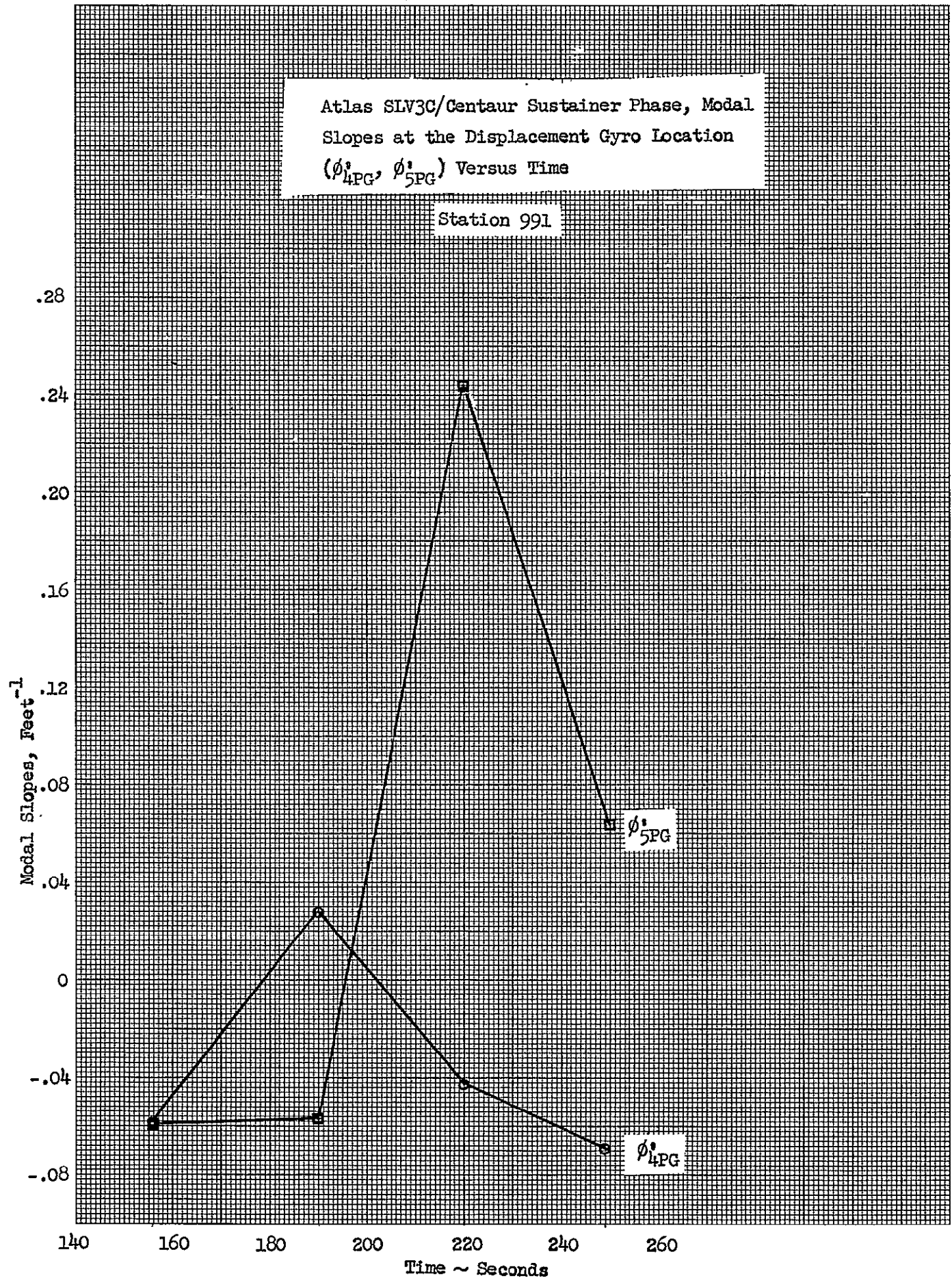


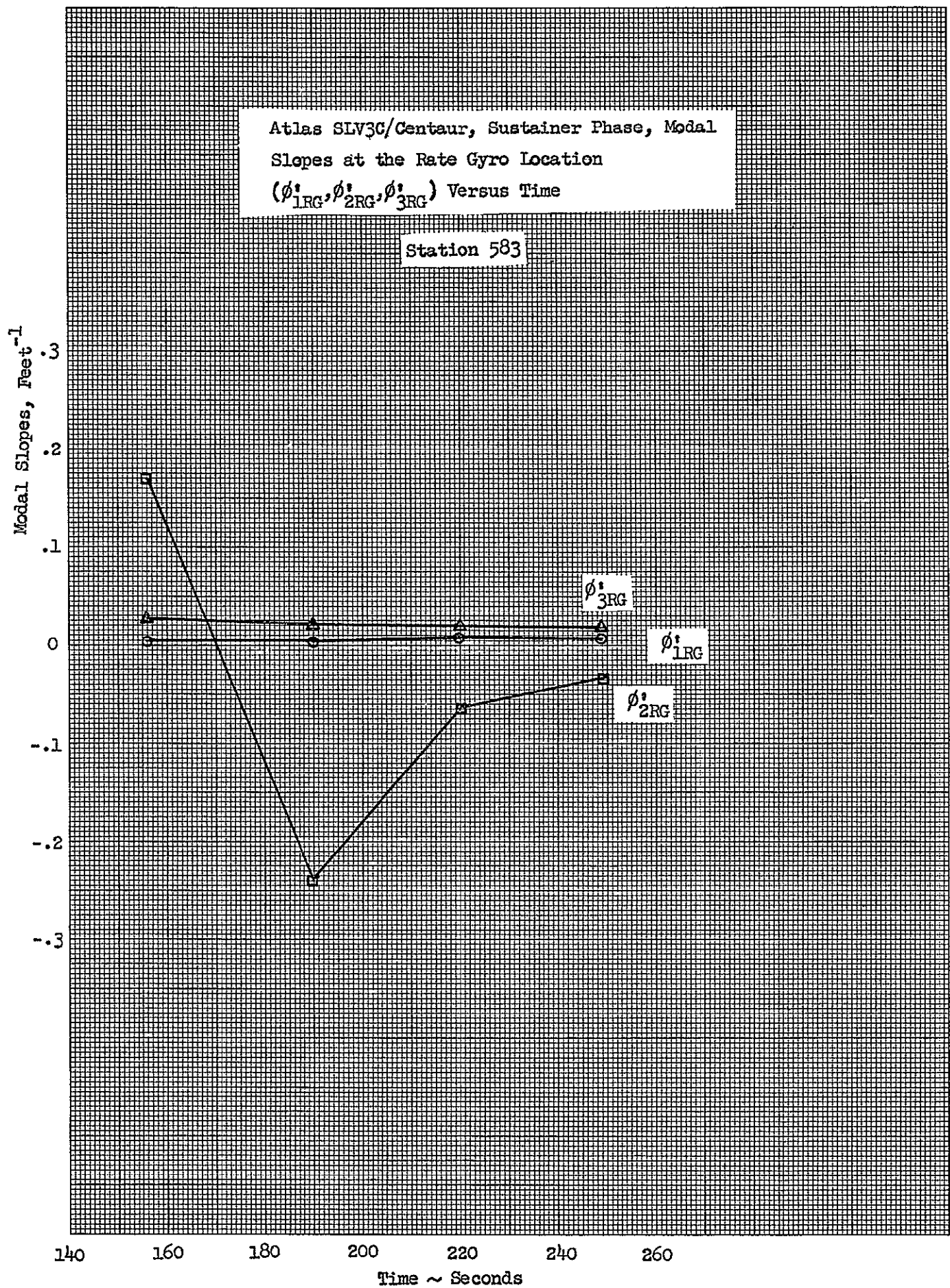






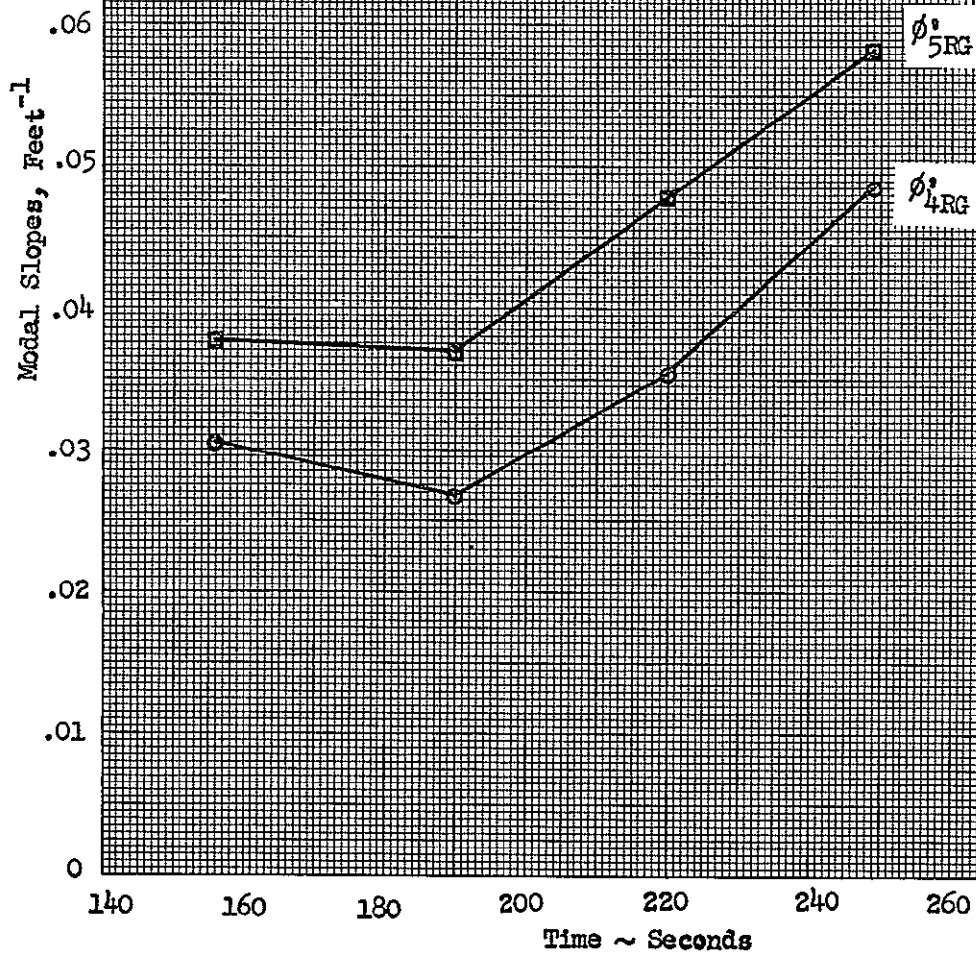


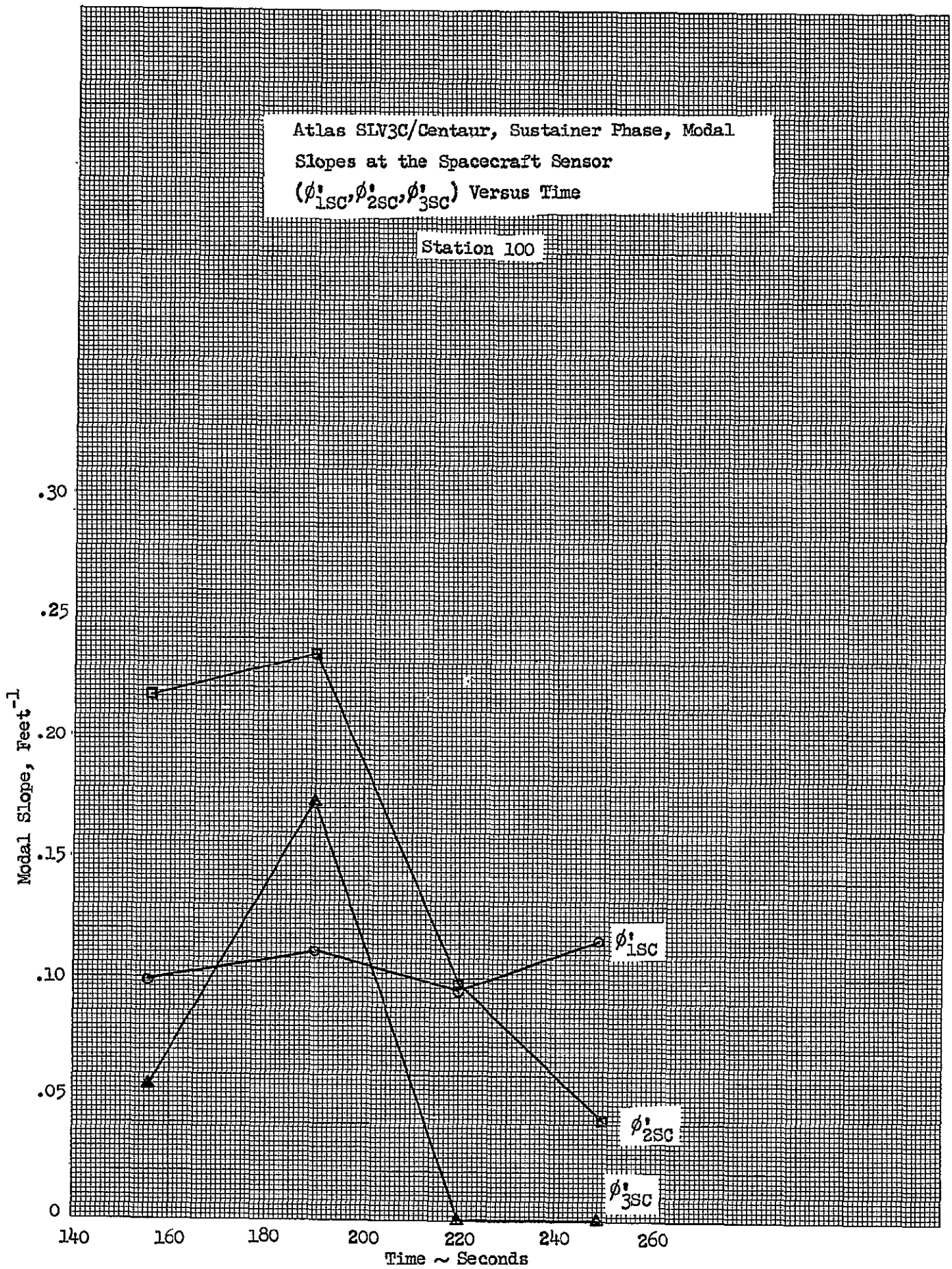


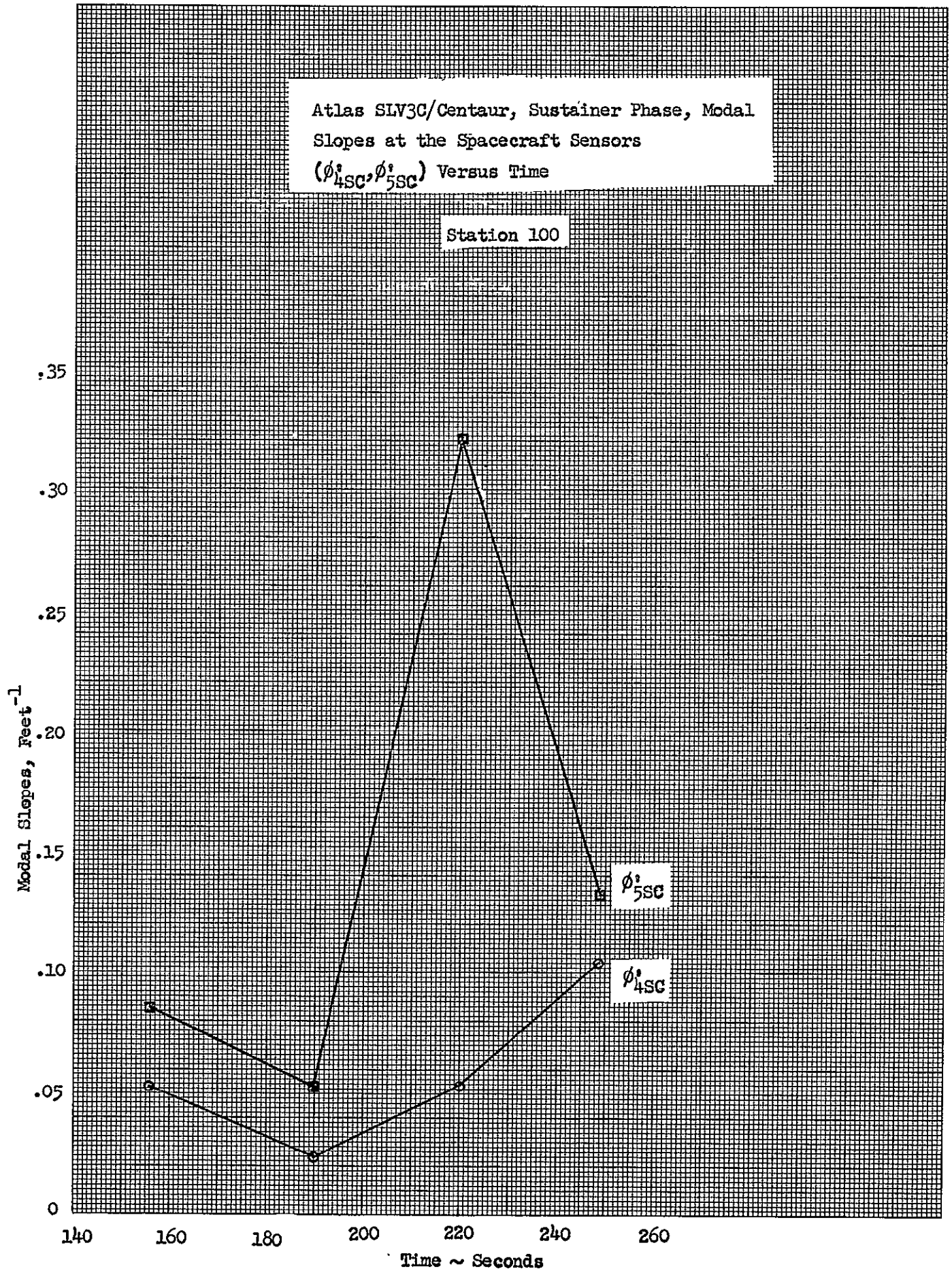


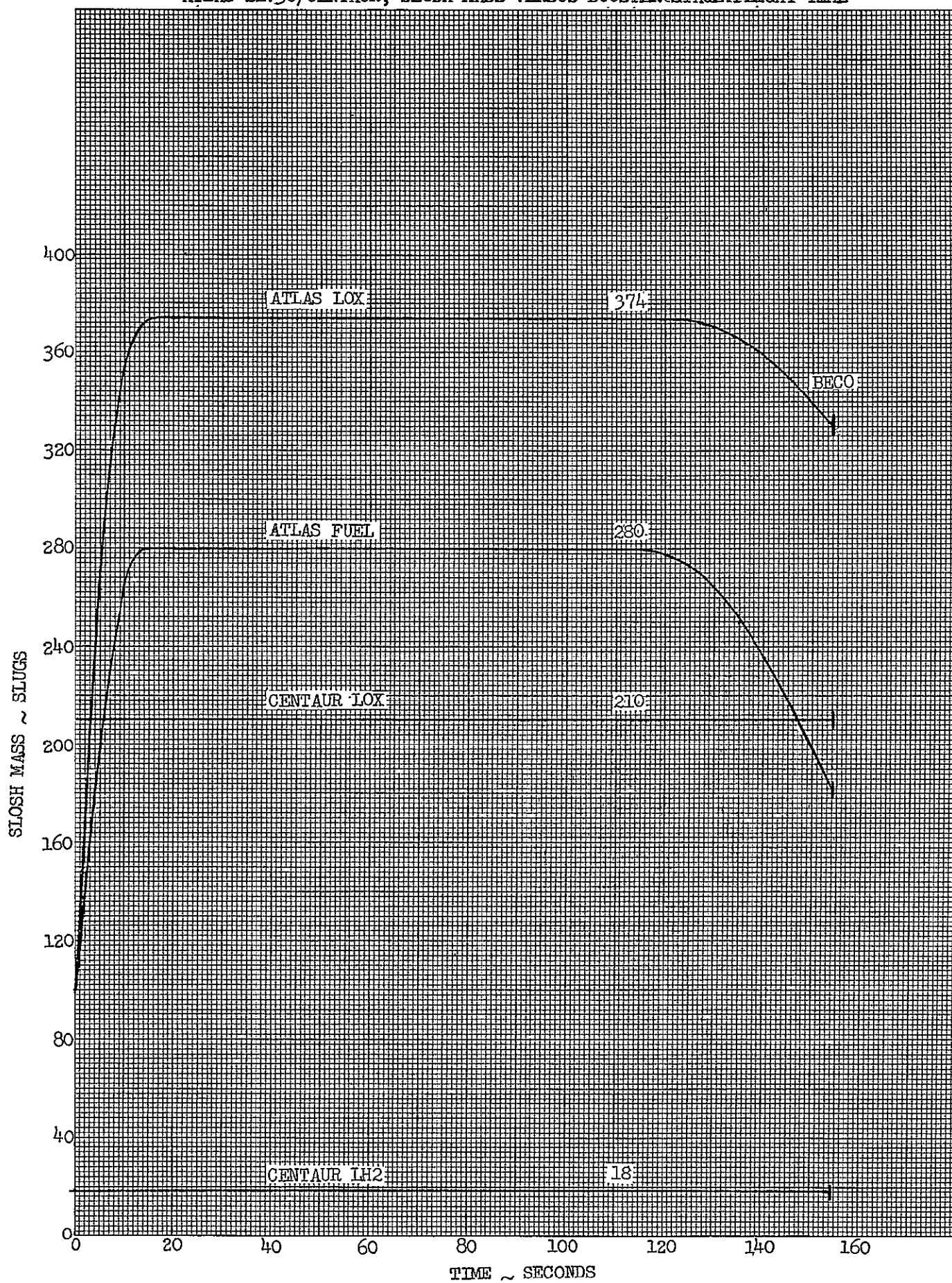
Atlas SLV3C/Centaur, Sustainer Phase, Modal
Slopes at the Rate Gyro Location
(ϕ_{4RG}^* , ϕ_{5RG}^*) Versus Time

Station 583



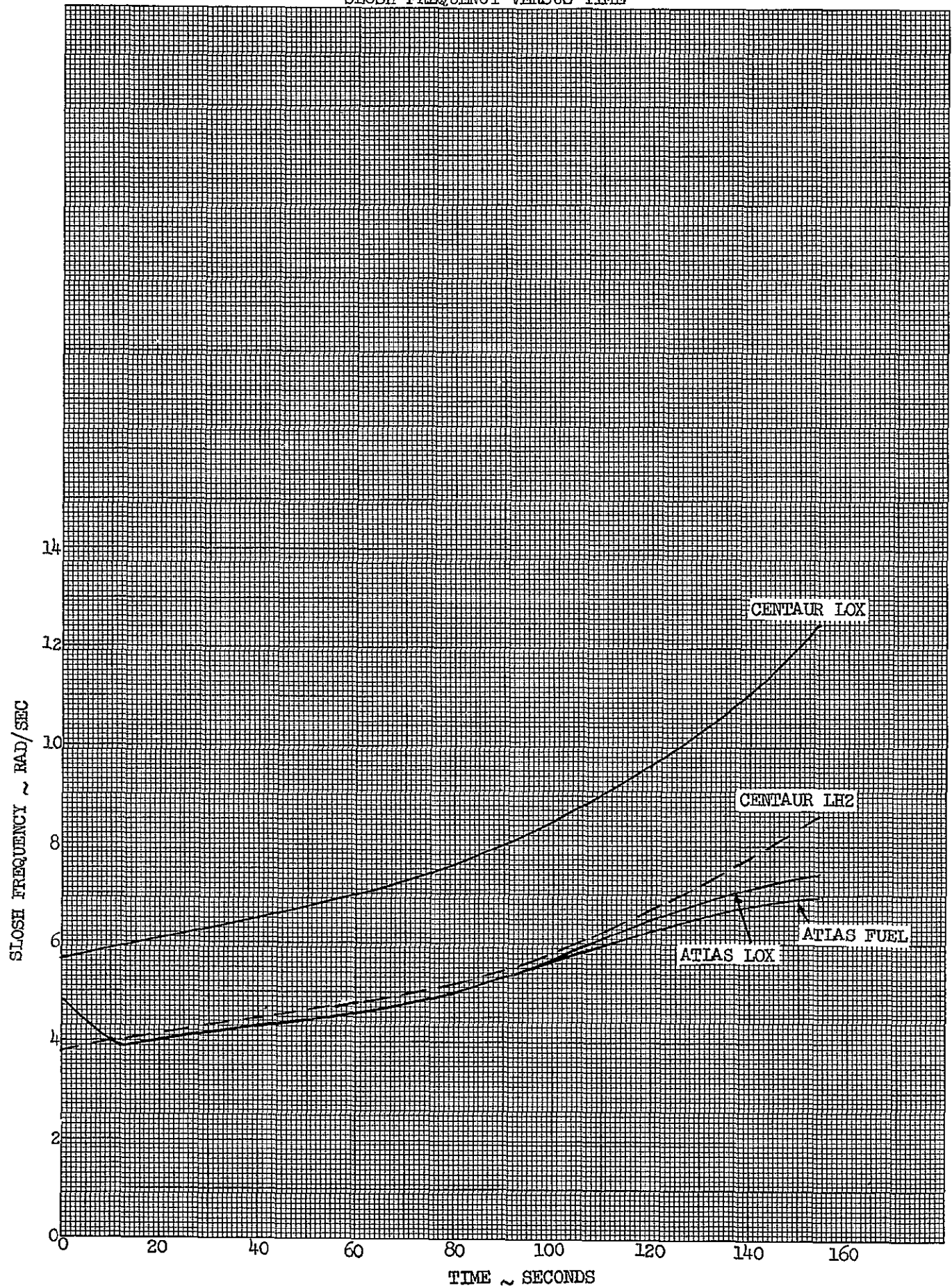






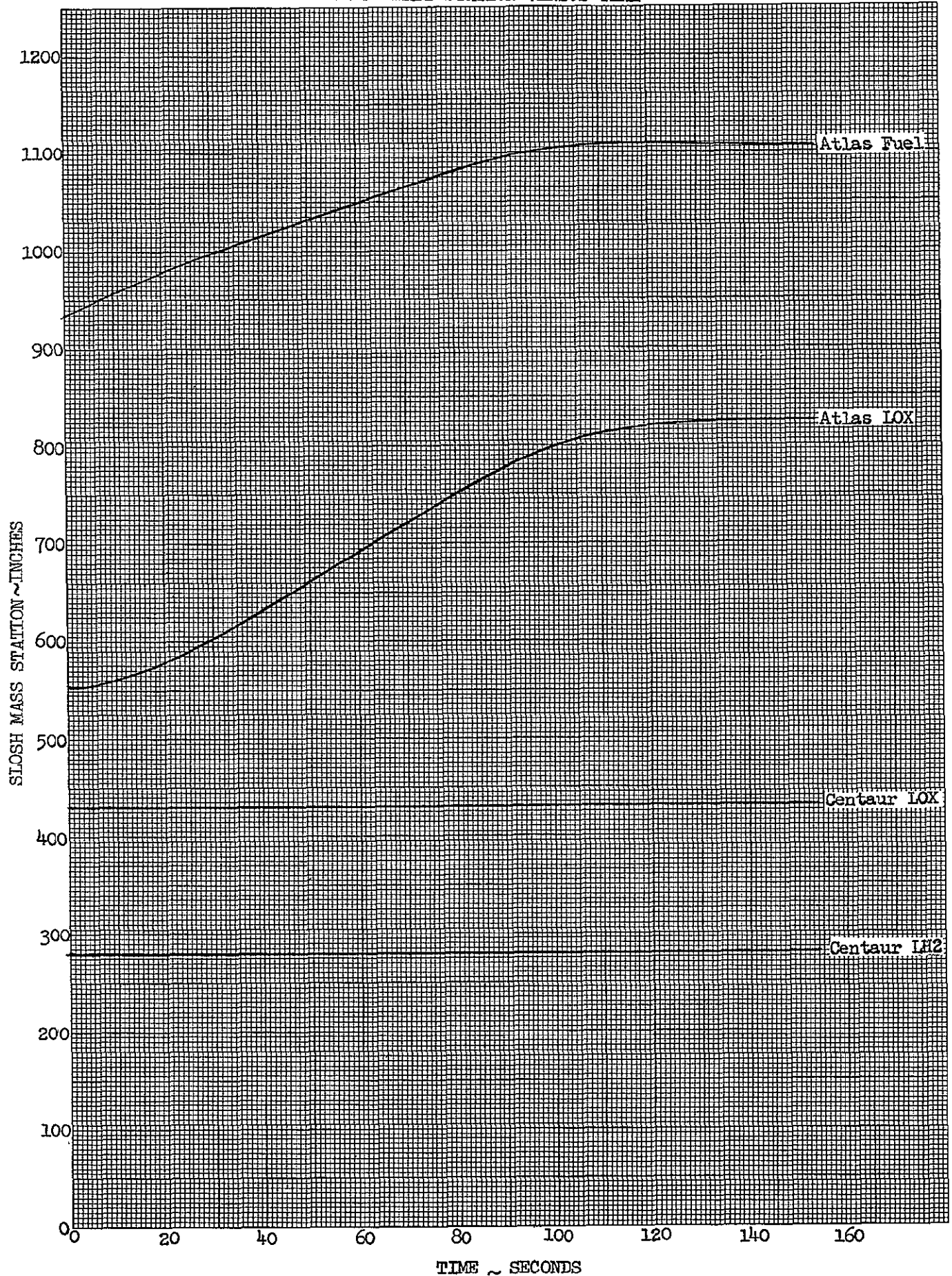
ATLAS SLV3C/CENTAUR
SLOSH FREQUENCY VERSUS TIME

41



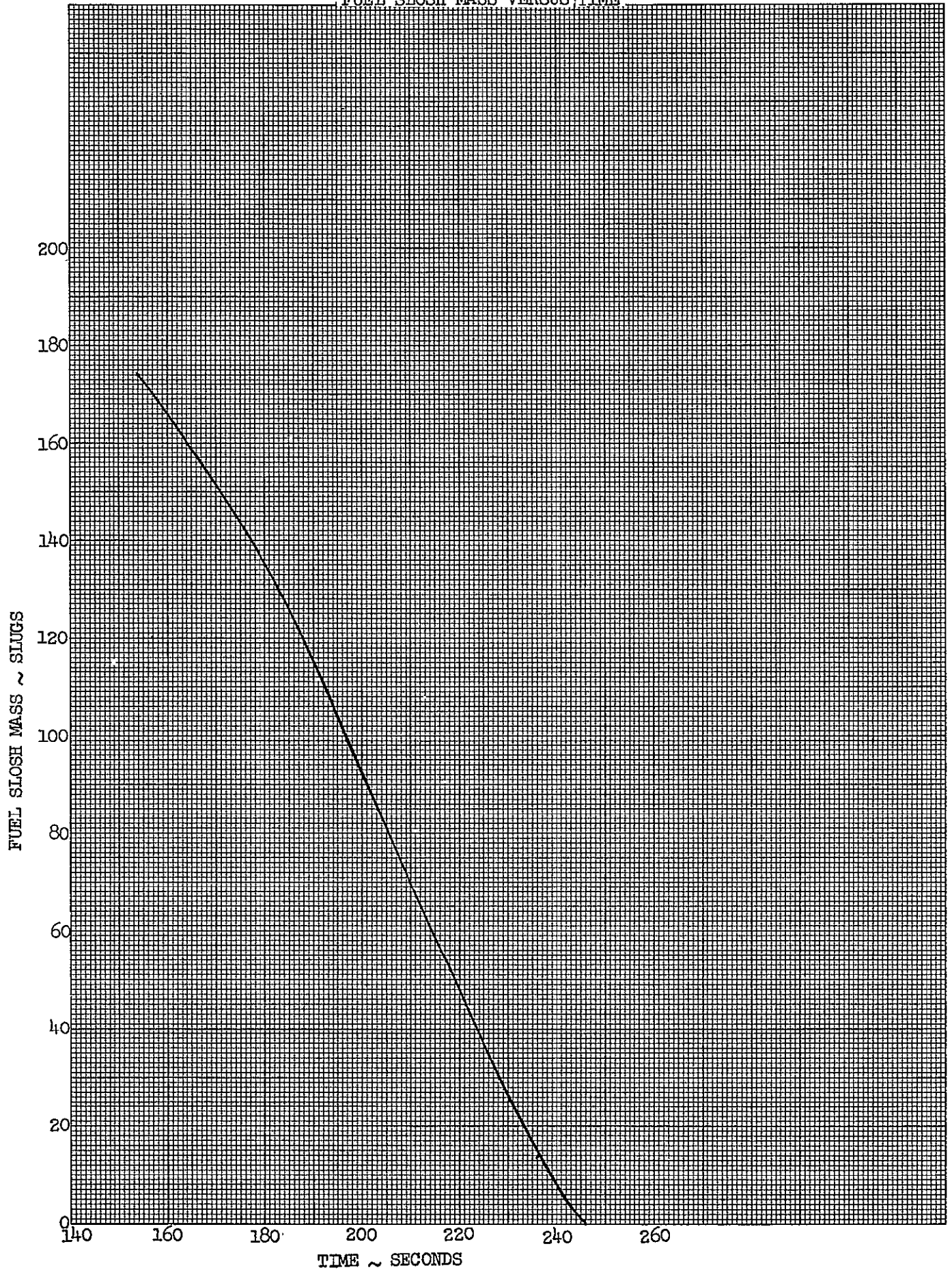
ATLAS SLV3C/CENTAUR, BOOSTER PHASE
SLOSH MASS STATION VERSUS TIME

42



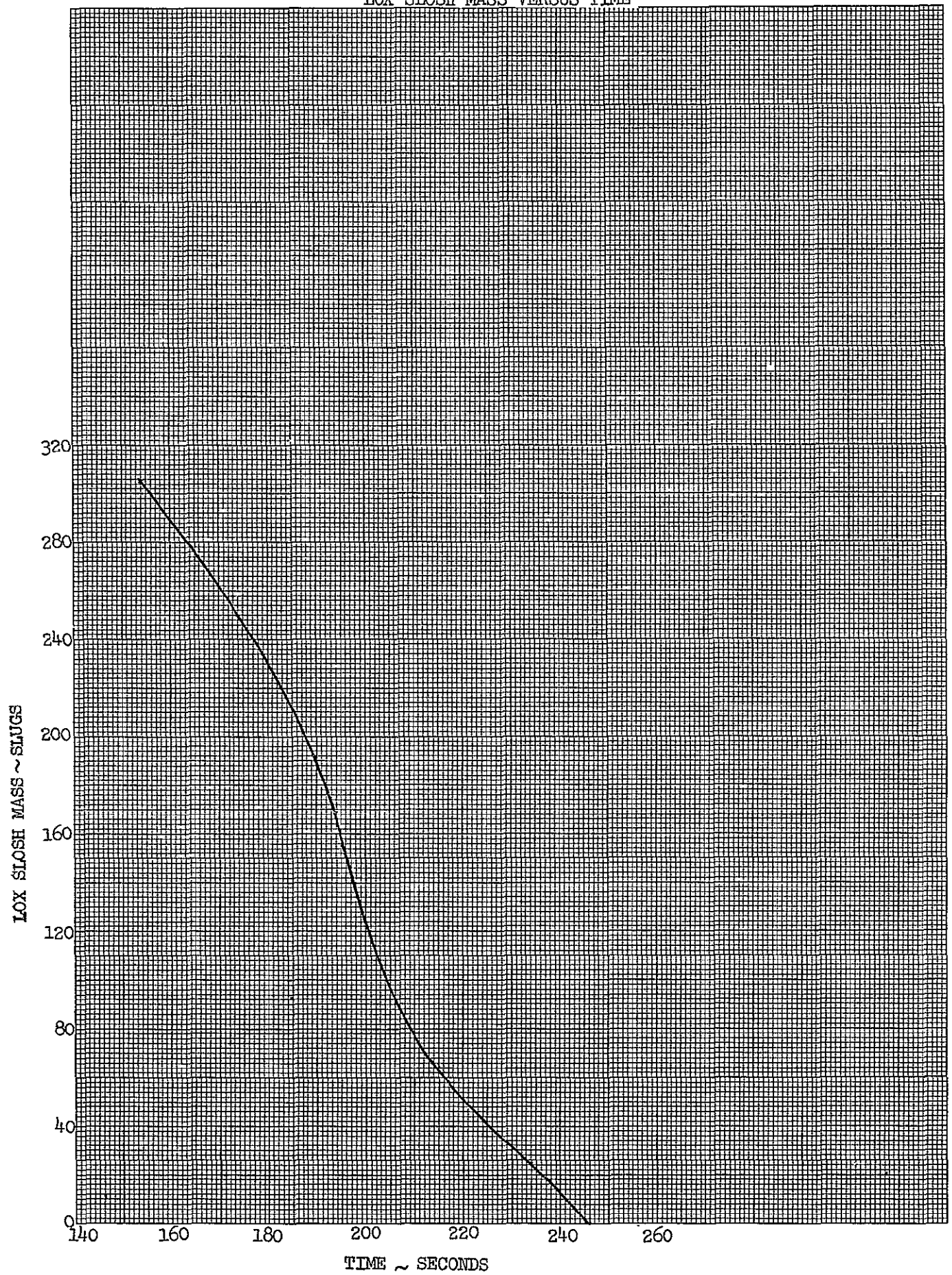
ATLAS SLV3C/CENTAUR, SUSTAINER PHASE
FUEL SLOSH MASS VERSUS TIME

43

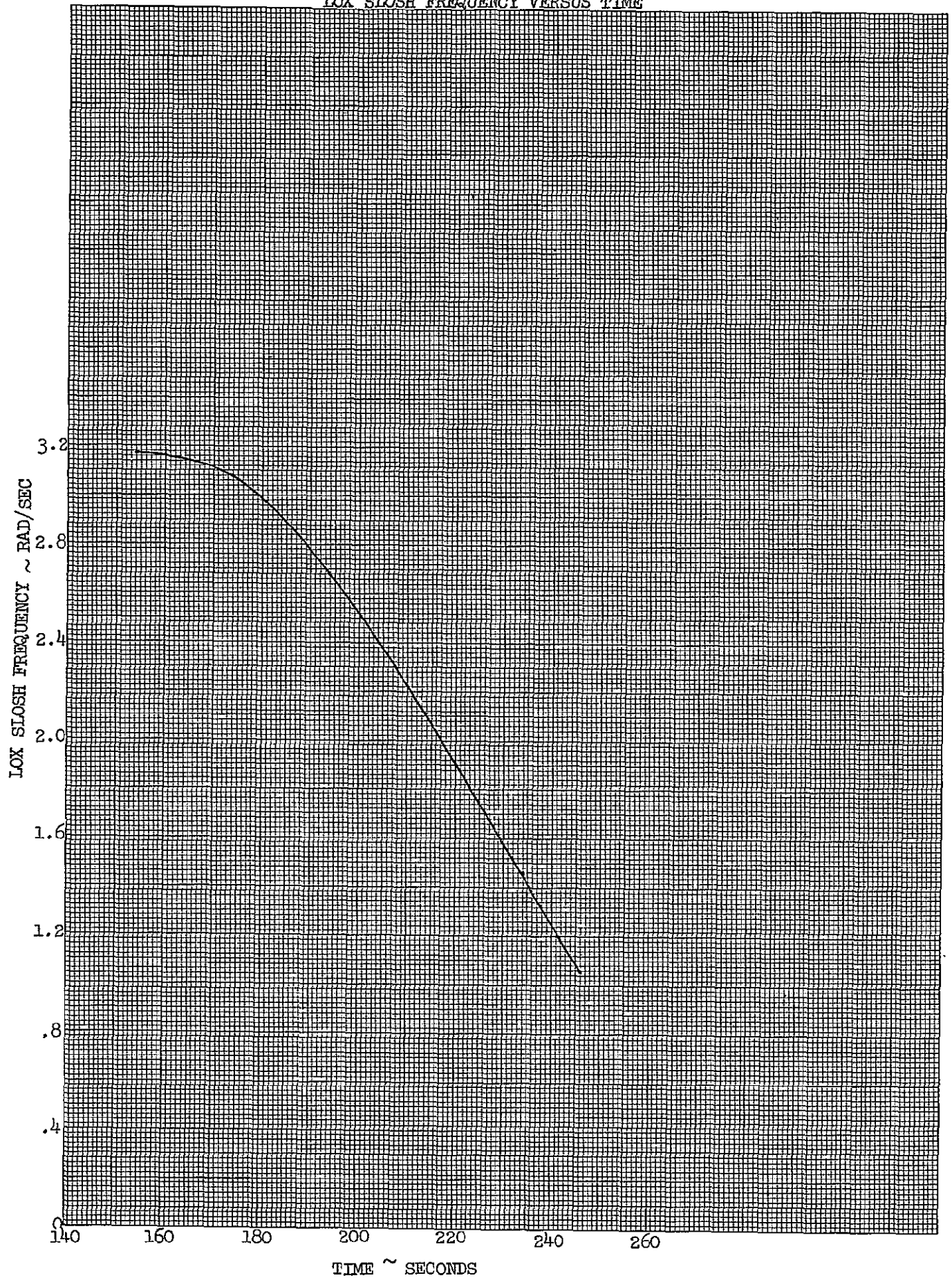


ATLAS SLV3C/CENTAUR, SUSTAINER PHASE
LOX SLOSH MASS VERSUS TIME

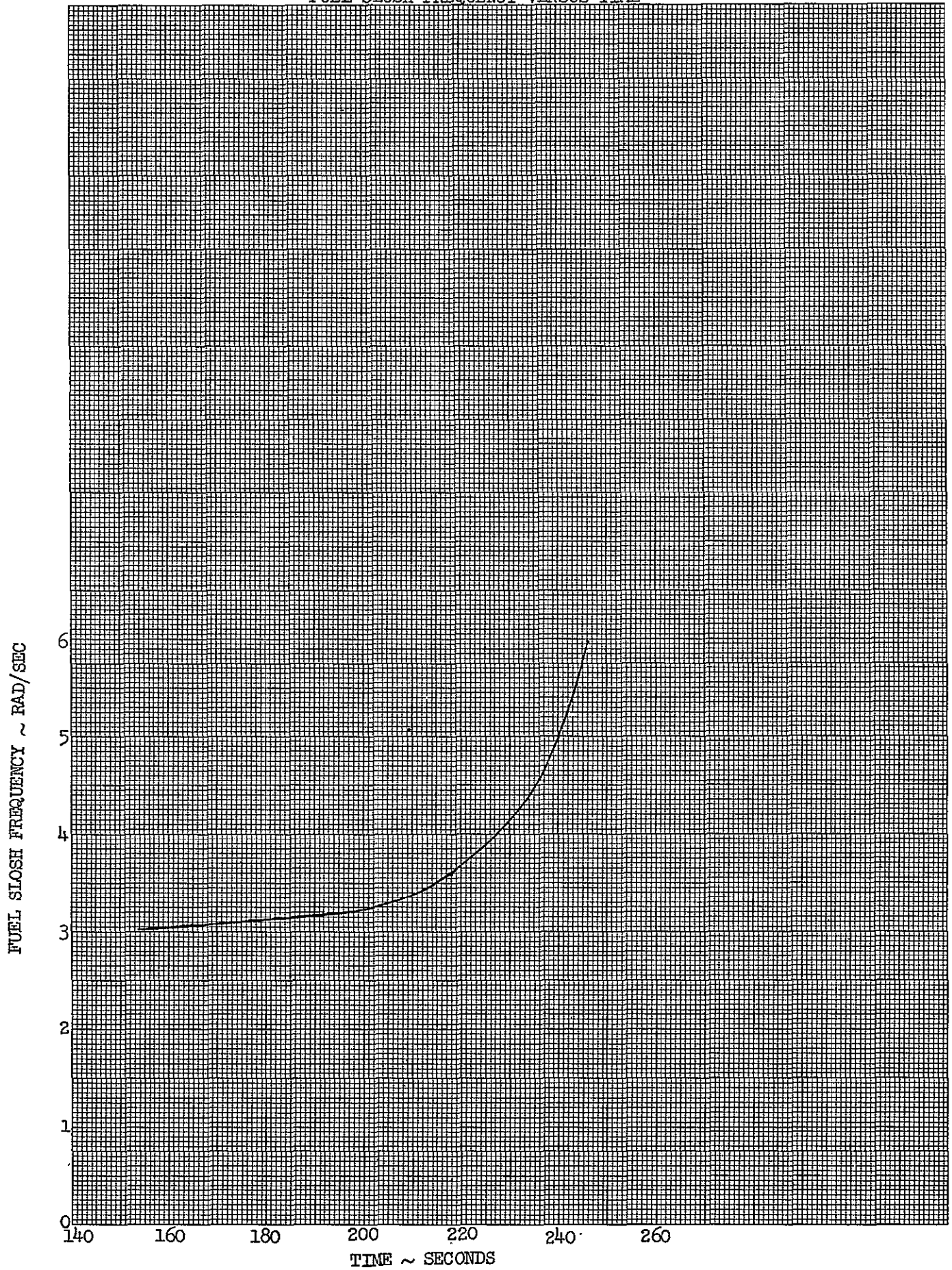
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LOX SLOSH FREQUENCY VERSUS TIME

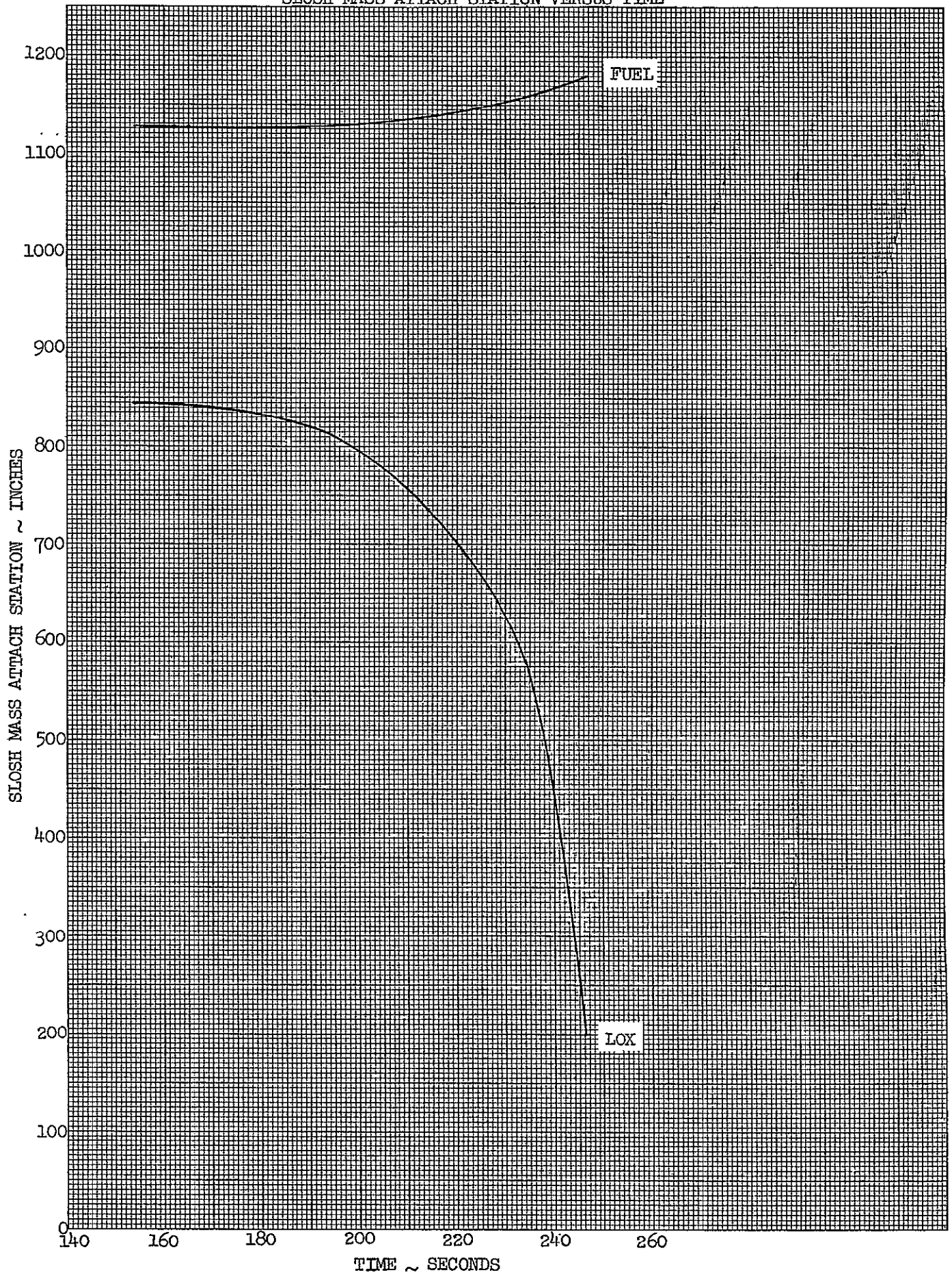


FUEL SLOSH FREQUENCY VERSUS TIME



ATLAS SLV3C/CENTAUR, SUSTAINER PHASE
SLOSH MASS ATTACH STATION VERSUS TIME

47



5. THRUST VECTOR CONTROL DATA

Data and linearized models for the Atlas/Centaur TVC system are given in Tables C-5 through C-7 and in Figures C-5 and C-6.

Table C-5
Booster Engine Servoactuator Data

<u>Booster Engine Parameters For One Engine</u>			
I_h	slug-ft ²	=	377
M_e	slug	=	30.8
l_e	ft	=	2.52
X_h	in.	=	1212
ω_{TWD}	rad/sec	=	46
ω_{DWT}	rad/sec	=	93
K_c	sec ⁻¹	=	36
δ_{max}	deg	=	5
$\dot{\delta}_{a\ max}$	deg/sec	=	28

Engine actuation model for $\delta\omega = 2^\circ/\text{sec}$:

$$\frac{\delta}{\delta_c} = \frac{K_c \omega_{DWT}^2}{(S + 27.5)(S + 68.35 \pm j81.6)}$$

Low-frequency approximation for $\delta\omega = 2^\circ/\text{sec}$:

$$\frac{\delta}{\delta_c} \approx \frac{K_c}{S + K_c} = \frac{18}{S + 18}$$

Engine actuation model for $\delta\omega = 1^\circ/\text{sec}$:

$$\frac{\delta}{\delta_c} = \frac{K_c \omega_{DWT}^2}{(S + 14.5)(S + 120 \pm j84)}$$

Low-frequency approximation for $\delta\omega = 1^\circ/\text{sec}$:

$$\frac{\delta}{\delta_c} = \frac{K_c}{S + K_c} = \frac{12.5}{S + 12.5}$$

Table C-6
Atlas Servoactuator Characteristics

Symbol	Definition	Units	Booster	Sustainer
A	Actuating piston area	ft ²	2.47×10^{-2}	4.1×10^{-2}
B	Bulk modulus of hydraulic fluid	lb/ft ²	3.89×10^7	3.89×10^7
C _B	Coulomb friction coefficient	ft-lb	5.65×10^2	5.59×10^2
C _L	Discharge coefficient for leakage (bypass) orifice	$\frac{\text{ft}^3/\text{sec}}{\sqrt{\text{lb}/\text{ft}^2}}$	4.78×10^{-6}	2.47×10^{-6}
C _V	Viscous friction coefficient	ft-lb-sec/deg	6.3 x 10	3.76 x 10
I _R	Moment of inertia, engine-gimbaled "wet" mass about engine gimbal axis	slug-ft ²	3.77×10^2	4.20×10^2
K _a	Servoamplifier gain	ma/V	2.7	3.42
K _m	Spring constant of actuator-backup structure	lb/ft	1.138×10^6	1.441×10^6
K _t	Feedback transducer gain	volt/deg	2.2	3.0
K _V	Servovalve discharge coefficient	$\frac{\text{ft}^3/\text{sec}}{\text{mA} \sqrt{\text{lb}/\text{ft}^2}}$	7.125×10^{-6}	1.68×10^{-6}
l _R	Distance from center of gravity of gimbaled mass to center line of engine gimbal axis	ft	2.52	2.68

Table C-6
Atlas Servoactuator Characteristics (Cont'd)

Symbol	Definition	Units	Booster	Sustainer
M_R	Gimbaled mass, one engine "wet"	slugs	3.08×10	3.19×10
P_R	Hydraulic return pressure from servovalve	lb/ft ²	7.2×10^3	7.2×10^3
P_S	Hydraulic supply pressure to servovalve	lb/ft ²	4.32×10^5	4.32×10^5
R	Distance from center line of actuator mounting to center line of engine at gimbal point	ft	1.769	8.33×10^{-1}
V_T	Total volume of hydraulic fluid in one actuator cylinder	ft ³	7.6×10^{-3}	4.14×10^{-3}
T	Thrust	lb	1.545×10^5	5.7×10^4
K_c	No-load, open-loop actuator velocity gain		36.8	18.06
δ_{\max}	Engine displacement limit	deg	5	3
$\dot{\delta}_{\max}$	Engine actuation rate limit	deg/sec	28	42

Table C-7
Centaur Servovalve-Actuator-Engine Parameters-
RL-10A-3 Propulsion System

Symbol	Definition	Units	Value
A	Actuating piston area	ft ²	1.06 x 10 ⁻²
B	Bulk modulus of hydraulic fluid	lb/ft ²	3.89 x 10 ⁷
C _b	Coulomb friction coefficient	ft/lb	200
C _v	Viscous friction coefficient	ft lb/deg/sec	3.62
I _R	Moment of inertia, engine-gimbaled "wet" mass about engine gimbal axis	slug-ft ²	66.5
M _R	Gimbaled mass, one engine "wet"	slugs	11.0
ℓ _R	Distance from center of gravity of gimbaled mass to center line of engine gimbal axis	ft	2.04
R	Distance from center line of actuator mounting to center line of engine at gimbal point	ft	1.16
K _a	Servoamplifier gain	mA/volt	3.6
K _t	Feedback transducer gain	volt/deg	2.06
K _m	Spring constant of actuator-backup structure	lb/ft	5.1 x 10 ⁵
K _v	Servovalve discharge coefficient	$\frac{(\text{ft}^3/\text{sec})}{\text{mA} \sqrt{\text{lb}/\text{ft}^2}}$	1.02 x 10 ⁻⁶

Table C-7
Centaur Servovalve-Actuator-Engine Parameters-
RL-10A-3 Propulsion System (Cont'd)

Symbol	Definition	Units	Value
P_R	Hydraulic return pressure from servovalve	lb/ft ²	7.2×10^3
P_S	Hydraulic supply pressure to servovalve	lb/ft ²	1.512×10^5
T		lb	1.5×10^4
V_T	Total volume of hydraulic fluid in one actuator cylinder	ft ³	1.33×10^{-3}
K_c	No-load, open-loop actuator velocity gain	1/sec	13.1
A_F	Area of washout piston DPF	ft ²	3.41×10^{-4}
C_F	Discharge coefficient for DPF orifice	$\frac{(\text{ft}^3/\text{sec})}{\sqrt{\text{lb}/\text{ft}^2}}$	1.342×10^{-7}
K_f	Spring constant-washout piston	lb/ft	9.36×10^3
K_s	Pressure feedback gain	mA/lb/ft ²	1.218×10^{-4}

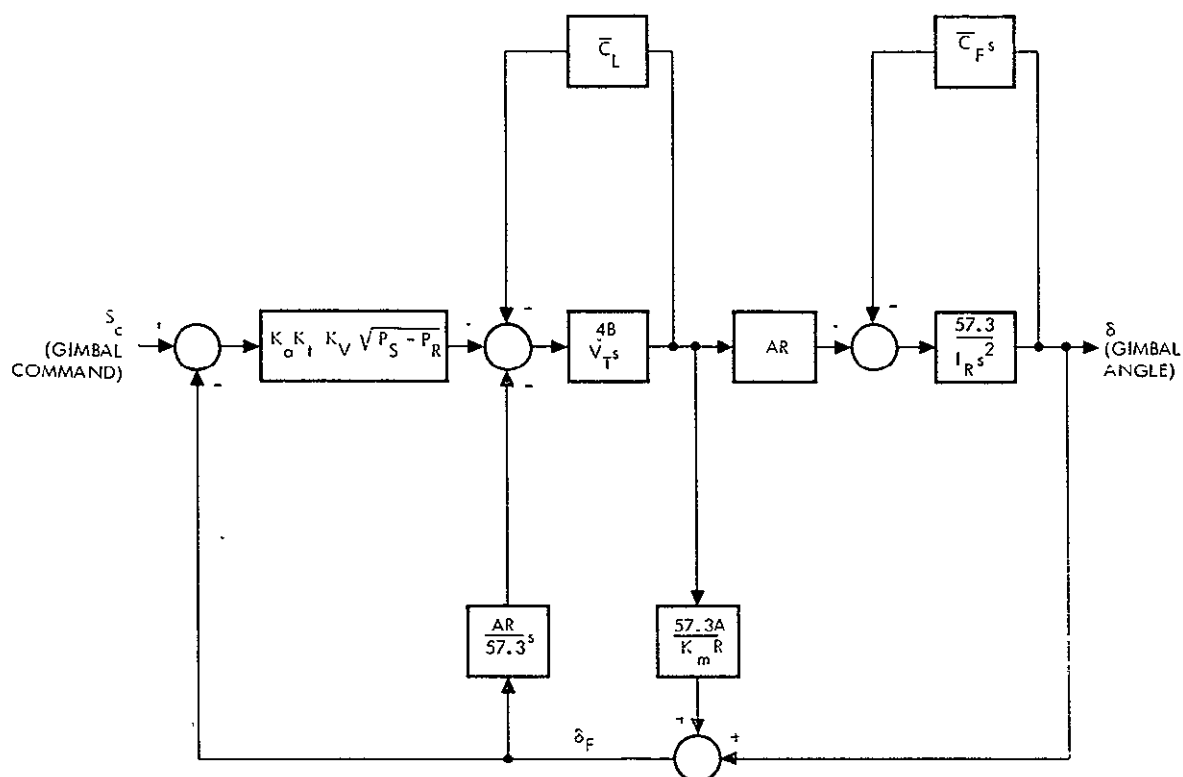


Figure C-5. Linearized Block Diagram of Atlas Booster and Sustainer Servoactuator (load torque assumed negligible)

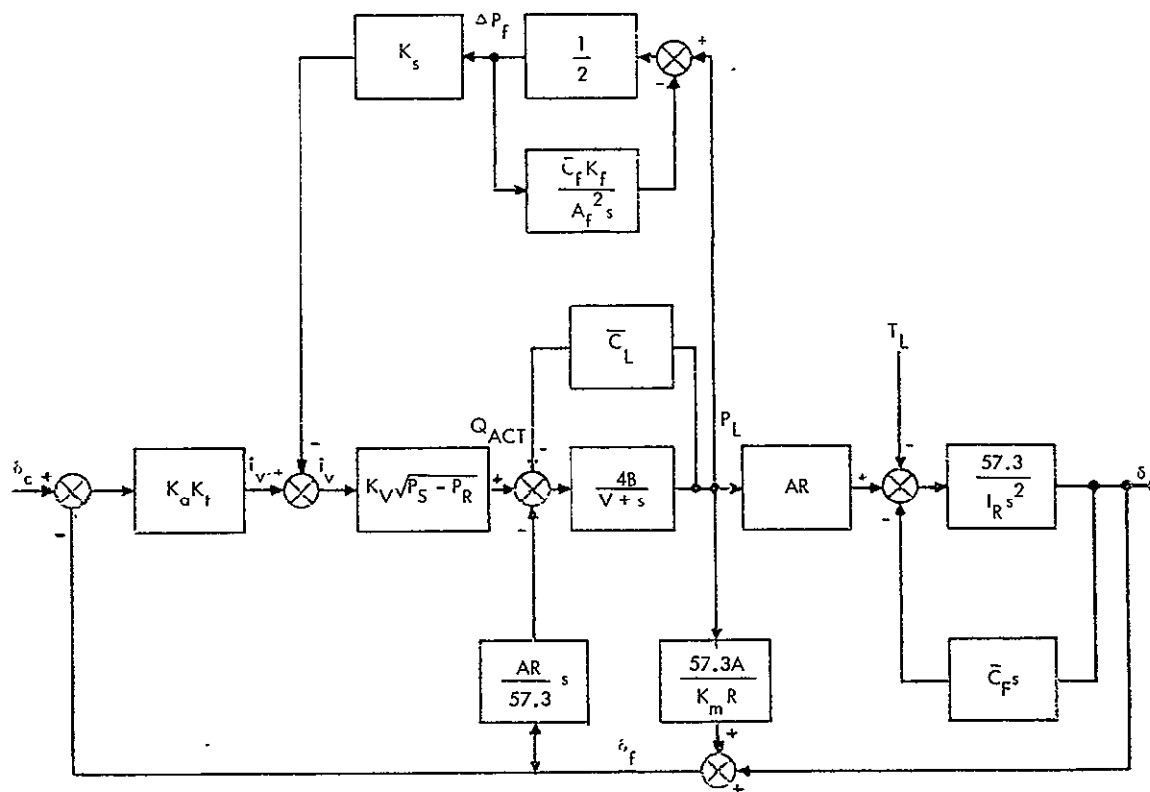


Figure C-6. Linearized Block Diagram Centaur Servoactuator

*GDID-CD-66-016-RA SLV-3C/5901 15 MAY 1967

WEIGHT, CG AND INERTIA DATA ---

SLV-3C/AC-13 MASS PROPERTY DATA FROM CW67-26 REV.A, DATED 4 MAY 1967
 CENTAUR LOX = 25035.92 LBS., CENTAUR FUEL = 4931.0 LBS.
 SUSTAINER CONFIGURATION 2 INCLUDES 993 POUNDS IN THE LOX LINE AND THE
 1077 POUND ADAPTER. THE CENTAUR WEIGHT INCLUDES DYNAMICS RESIDUALS BUT
 NO BURNABLE PROPELLANTS.

AERODYNAMIC DATA ---

SLV-3C/CENTAUR/SURVEYOR TOTAL VEHICLE AERODYNAMIC COEFFICIENTS ARE IN THE
 TABLE LABELED A3CSUR.

PROPELLANT SLOSHING DATA ---

SLOSH TABLES WITH THE SHEAR MEMBRANE IN THE FUEL TANK ARE L3CMEM.
 REFO(1) = 22.6, REFF(1) = 0.0, REFO(2) AND REFF(2) = 51.0
 LOX DENSITY = 68.402655, FUEL DENSITY = 50.1115 AT MAX ALPHA Q (T = 48 SEC)
 CENTAUR SLOSH TABLES ARE LABELED SEN6IN.

TRAJECTORY DATA ---

5901 (SLV-3C/AC-13) TRAJECTORY ID IS 13-2(MAR 67).
 THE CENTAUR PROPELLANT WEIGHTS (WOO(2) AND WOF(2)) OBTAINED FROM THE
 TRAJECTORY ARE IN ERROR. THESE WEIGHTS ARE RAISED TO THE DESIRED VALUES
 BY ADDING 244.92 POUNDS TO THE LOX TANK (TOTAL WEIGHT THEN CORRESPONDS TO
 A 12 CUBIC FOOT ULLAGE VOLUME) AND 165 POUNDS TO THE LH2 TANK. OTHER
 TRAJECTORY PROPELLANT ERRORS (SUCH AS VENTING GXX) AND CONTROL DYNAMICS
 APPROXIMATIONS PRODUCE THE DIFFERENCE BETWEEN THE GREEN BOOK TOTAL WEIGHT
 AND THE TRAJECTORY WEIGHT. THE GREEN BOOK DATA IS, HOWEVER, ACCEPTABLE.
 CG AND INERTIA DATA NOT VALID PAST 242.5 SECONDS DUE TO LOX IN LOX LINE.

TABLE IDENTIFICATION A3CSUR

AERODYNAMIC COEFFICIENTS FOR 5901 * SLV-3C/CENTAUR(AC-13)/SURVEYOR *
 DATA FROM ABL-67-089 DATED 18 APRIL 1967 BY R.G. NORFELL
 ANGLE OF ATTACK AND ANGLE OF YAW = 6 DEGREES
 AEROPHICS AND DYNAMICS NOMENCLATURE CORRESPONDENCE IS - - -
 (CN/A)PHI=0 --CNA, (XCP/LREF)N --CPA, (CY/B)PHI=90 --CNB, (XCP/LREFF)Y --CNR
 THIS TABLE DATED 20 APRIL 1967

TABLE IDENTIFICATION L3CMEM

L3CMEM SLOSH TABLES WITH THE SHEAR MEMBRANE IN THE FUEL TANK
 EXTENDED SLOSH DATA FOR MODIFIED D SERIES MISSILE TANKS (CENTAUR - DAO TYPES)
 TOTAL EXTENSION IS 51 INCHES. (22.6 IN. FOR FUEL TANK, 28.4 IN. FOR LOX TANK)
 FUEL TANK WITH SHEAR MEMBRANE DATA FROM EGGLESTONS EXPERIMENTAL DATA
 OXIDIZER TANK DATA SAME AS TABLE LV3C51
 THESE TABLES USE STATION -960.0 AS THE BOTTOM OF THE LOX TANK.
 DATA FROM LOMENS NEW SLOSH PROGRAM AND WEIGHTS CONTROL GROUP.
 LOX DENSITY 70.0, FUEL DENSITY 50.4.
 THIS TABLE DATED 1 JUNE 1966

TABLE IDENTIFICATION SEN6IN

SEN6IN SLOSH TABLES
 AC-6 NEW SLOSH TABLES WITH THE THRUST BARREL IN THE LOX TANK
 THESE TABLES USE THE LATEST AND GREATEST EQUATIONS GENERATED BY LOMEN.
 LOX DENSITY = 68.78, FUEL DENSITY = 4.38
 VOLUMES WERE TAKEN FROM REPORT CW64-20, DATED 20 FEBRUARY 1964
 THIS TABLE DATED 10 AUGUST 1966

		BOOSTER SECT.	INSUL. PANELS	NOSE FAIRING	SUST 2 + ADAPT.	WET CENTAUR
WEIGHT	(LBS)	7.4598000+03	1.2069000+03	2.0390000+03	8.9390999+03	4.3041999+03
XCG	(SN)	-1.2196000+03	-2.7681000+02	-6.9539999+01	-9.4349999+02	-2.9660000+02
YCG	(IN)	-9.3000000+00	4.1900000+00	1.1800000+00	-6.8000000+00	4.6000000-01
ZCG	(IN)	-1.9000000+00	-8.1999999-01	-6.6999999-01	-1.2900000+01	1.5000000-01
IXX	(SF2)	5.0487000+03	9.9390000+02	1.1237000+03	5.1847000+03	1.6190000+03
IYY	(SF2)	5.3628000+03	1.4485000+03	3.1049000+03	1.4008460+05	1.5229600+04
IZZ	(SF2)	3.7005000+03	1.5024000+03	3.1476000+03	1.3955370+05	1.5380800+04
IXY	(SF2)	-2.3700000+02	-4.8899999+01	-3.4069999+01	2.3504000+03	6.1600000+01
IXZ	(SF2)	-1.2390000+02	3.8800000+00	3.3100000+00	1.1399000+03	-2.0070000+02
IYZ	(SF2)	1.3840000+02	-5.7600000+00	2.4310000+01	4.2600000+02	1.9300000+01
XHP	(IN)	-1.2120000+03	-1.2100000+03	-1.2100000+03	-1.2100000+03	-0.
WT AT SECT END(LB)		8.0941399+04	6.2060580+04	5.2758530+04	2.5000000+04	-0.

		SURVEYOR	TOTAL
WEIGHT	(LBS)	2.2871000+03	2.6236100+04
XCG	(SN)	-6.2099999+01	-7.4045079+02
YCG	(IN)	1.0000000-01	-4.5925440+00
ZCG	(IN)	2.0000000-01	-4.9832385+00
IXX	(SF2)	1.9400000+02	1.4465123+04
IYY	(SF2)	1.8700000+02	1.2791522+06
IZZ	(SF2)	1.8500000+02	1.2771325+06
IXY	(SF2)	-5.9299999+00	1.3003287+04
IXZ	(SF2)	-2.5100000+00	7.1719554+03
IYZ	(SF2)	-4.9000000+00	6.6428705+02
XHP	(IN)	-0.	
WT AT SECT END(LB)		-0.	

AERO TABLES ARE NOT USED AFTER STAGE 1
SC4020 FLAG -0.

WEIGHTS SUBTRACTED BEFORE TABLE LOOKUP OF SLOSHING PARAMETERS

		STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
OXIDIZER	(LBS)	9.9299999+02	-2.4492000+02			
FUEL	(LBS)	0.	-1.6500000+02			

SLOSHING TABLES OF THE PENDULUM ANALOGY WILL BE MODIFIED BY DIVIDING THE VARIABLES MASS M, SLOSHING MASS MP, REDUCED PROPELLANT MASS IOR AND THE TOTAL PROPELLANT MASS IO BY THE INDICATED DENSITY RATIO

		STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
OXIDIZER	(ND)	1.0233520+00	1.0000000+00			
FUEL	(ND)	1.0057570+00	1.0000000+00			

SLOSHING TABLES OF THE PENDULUM ANALOGY WILL BE MODIFIED BY ADDING THE INDICATED CHANGE IN REFERENCE LENGTH TO XHP, XR, HSN, AND XO.

		STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
OXIDIZER	(IN)	2.2600000+01	5.1000000+01			
FUEL	(IN)	0.	5.1000000+01			

T=FLIGHT TIME (SEC)	T= 0.	T= 0.5	T= 20.0	T= 40.0	T= 60.0	T= 80.0	T=100.0	T=112.0
TRAJECTORY PARAMETERS								
TCCN	(LPS)=	3.30+05	3.30+05	3.33+05	3.43+05	3.56+05	3.68+05	3.77+05
TFIX	(LRS)=	5.87+04	5.87+04	5.97+04	6.39+04	7.08+04	7.75+04	8.20+04
TWT	(LRS)=	3.24+05	3.24+05	2.93+05	2.61+05	2.30+05	1.98+05	1.54+05
XDRDGT	(FT/S2)=	3.75+01	3.77+01	4.30+01	4.96+01	5.73+01	6.69+01	9.46+01
VFL	(FT/S)=	5.12+05	2.73+00	1.67+02	4.56+02	9.30+02	1.60+03	3.25+03
ALT	(FT)=	0.	0.	1.50+03	7.37+03	1.98+04	4.03+04	8.36+04
RANGE	(FT-NM)=	2.44+07	1.14+05	2.08+03	1.61+01	1.03+00	3.28+00	1.14+01
LONG	(DEG)=	2.79+02	2.79+02	2.79+02	2.79+02	2.79+02	2.80+02	2.80+02
LAT	(DEG)=	2.83+01	2.83+01	2.83+01	2.83+01	2.83+01	2.83+01	2.82+01
PSI	(DEG)=	9.00+01	9.00+01	8.74+01	7.68+01	6.43+01	5.22+01	3.35+01
GAMMA	(DEG)=	-2.11+02	8.92+01	8.88+01	7.42+01	6.16+01	5.09+01	3.46+01

PROPELLANT MASS PARAMETERS

PROP FLOW	(LBS/S)=	1.58+03	1.58+03	1.58+03	1.59+03	1.58+03	1.57+03	1.57+03
WOO(1)	(LRS)=	1.86+05	1.85+05	1.64+05	1.42+05	1.20+05	9.88+04	6.85+04
MO(1)	(SLUGS)=	5.74+03	5.72+03	5.07+03	4.39+03	3.71+03	3.04+03	2.10+03
HSNC(1)	(SN)=	-4.93+02	-4.95+02	-5.44+02	-5.93+02	-6.42+02	-6.90+02	-7.58+02
WOF(1)	(LRS)=	8.35+04	8.33+04	7.36+04	6.37+04	5.39+04	4.41+04	3.04+04
MF(1)	(SLUGS)=	2.60+03	2.59+03	2.29+03	1.98+03	1.67+03	1.37+03	9.45+02
HSNF(1)	(SN)=	-9.10+02	-9.12+02	-9.44+02	-9.74+02	-1.00+03	-1.03+03	-1.08+03
WOO(2)	(LRS)=	2.48+04	2.48+04	2.48+04	2.48+04	2.48+04	2.48+04	2.48+04
MO(2)	(SLUGS)=	7.78+02	7.78+02	7.78+02	7.78+02	7.78+02	7.78+02	7.78+02
HSNO(2)	(SN)=	-3.24+02	-3.24+02	-3.24+02	-3.24+02	-3.24+02	-3.24+02	-3.24+02
WOF(2)	(LRS)=	4.77+03	4.77+03	4.77+03	4.77+03	4.77+03	4.77+03	4.77+03
MF(2)	(SLUGS)=	1.53+02	1.53+02	1.53+02	1.53+02	1.53+02	1.53+02	1.53+02
HSNF(2)	(SN)=	-1.57+02	-1.57+02	-1.57+02	-1.57+02	-1.57+02	-1.57+02	-1.57+02
TMASS	(SLUGS)=	1.01+04	1.01+04	9.10+03	8.12+03	7.13+03	6.16+03	4.79+03

AERCDYNAMIC PARAMETERS

MACH	(NC)=	4.52+08	2.41+03	1.48+01	4.12+01	8.73+01	1.65+00	3.31+00
DYN PRESS	(PSF)=	0.	8.56+03	3.08+01	1.93+02	5.44+02	8.01+02	3.82+02
ALPHA	(DEG)=	9.00+01	-3.86+01	-1.30+00	2.79+00	3.00+00	1.74+00	-4.73+01
BETA	(DEG)=	0.	0.	0.	0.	0.	0.	0.
7A	(LBS/R)=	0.	2.14+00	7.68+03	4.92+04	1.84+05	3.00+05	1.58+05
YB	(LBS/R)=	0.	2.83+00	1.02+04	6.58+04	2.11+05	3.35+05	1.77+05
DELTAP	(DEG)=	-6.36+02	-6.37+02	-2.82+02	-5.90+01	-1.54+00	-1.55+00	1.12+01
DELTAY	(DEG)=	0.	0.	0.	0.	0.	0.	0.
LIFT	(LRS)=	0.	-1.12+02	-1.61+02	2.40+03	8.65+03	8.30+03	-9.50+02
CRAG	(LRS)=	-1.02+04	-9.00+03	-6.36+02	-4.20+03	-1.65+04	-3.35+04	-5.48+03

Launch Through 112 Seconds

T=FLIGHT TIME (SEC)		T=124.0	T=153.6	T=156.7	T=160.5	T=199.5	T=229.0	T=242.5	T=246.5
TRAJECTORY PARAMETERS									
TCON	(LBS)=	3.79+05	3.82+05	8.11+04	8.11+04	8.08+04	8.04+04	8.09+04	8.08+04
TFIX	(LBS)=	8.23+04	8.27+04	1.25+03	1.25+03	1.25+03	1.25+03	1.25+03	1.25+03
TWT	(LBS)=	1.29+05	8.22+04	8.10+04	7.25+04	6.08+04	5.08+04	4.72+04	4.62+04
XDBOOT	(FT/S2)=	1.15+02	1.83+02	3.43+01	3.65+01	4.35+01	5.19+01	5.63+01	5.76+01
VFL	(FT/S)=	4.58+03	8.53+03	8.63+03	8.73+03	9.91+03	1.11+04	1.17+04	1.19+04
ALT	(FT)=	1.16+05	1.94+05	2.03+05	2.15+05	3.22+05	3.91+05	4.20+05	4.28+05
RANGE	(FT-NM)=	2.01+01	4.84+01	5.25+01	5.75+01	1.14+02	1.62+02	1.87+02	1.94+02
LCNC	(DEG)=	2.80+02	2.80+02	2.80+02	2.80+02	2.81+02	2.82+02	2.83+02	2.83+02
LAT	(DEG)=	2.82+01	2.80+01	2.79+01	2.79+01	2.75+01	2.71+01	2.69+01	2.69+01
PSI	(DEG)=	2.77+01	1.99+01	1.99+01	1.99+01	1.55+01	1.49+01	1.44+01	1.43+01
GAMMA	(DEG)=	2.85+01	2.15+01	2.10+01	2.03+01	1.46+01	1.15+01	1.04+01	1.01+01

PROPELLANT MASS PARAMETERS

PROP FLCW	(LBS/S)=	1.58+03	1.59+03	2.71+02	2.72+02	2.70+02	2.70+02	2.72+02	2.72+02
WOO(1)	(LBS)=	5.10+04	1.86+04	1.77+04	1.70+04	5.67+03	4.21+03	1.72+03	9.35+02
MO(1)	(SLUGS)=	1.56+03	5.46+02	5.20+02	4.97+02	2.70+02	1.00+02	2.24+01	0.
HSNO(1)	(SN)=	-7.97+02	-8.69+02	-8.71+02	-8.73+02	-8.89+02	-9.03+02	-9.17+02	-9.37+02
WOF(1)	(LBS)=	2.26+04	8.42+03	8.07+03	7.77+03	4.58+03	2.10+03	9.71+02	6.67+02
MF(1)	(SLUGS)=	7.04+02	2.62+02	2.51+02	2.41+02	1.42+02	6.54+01	3.02+01	2.07+01
HSNF(1)	(SN)=	-1.10+03	-1.14+03	-1.14+03	-1.15+03	-1.16+03	-1.17+03	-1.18+03	-1.18+03
WOO(2)	(LBS)=	2.48+04	2.48+04	2.48+04	2.48+04	2.48+04	2.48+04	2.48+04	2.48+04
MO(2)	(SLUGS)=	7.78+02	7.78+02	7.78+02	7.78+02	7.78+02	7.78+02	7.78+02	7.78+02
HSNO(2)	(SN)=	-3.24+02	-3.24+02	-3.24+02	-3.24+02	-3.24+02	-3.24+02	-3.24+02	-3.24+02
WOF(2)	(LBS)=	4.77+03	4.77+03	4.77+03	4.77+03	4.77+03	4.77+03	4.77+03	4.77+03
MF(2)	(SLUGS)=	1.53+02	1.53+02	1.53+02	1.53+02	1.53+02	1.53+02	1.53+02	1.53+02
HSNF(2)	(SN)=	-1.57+02	-1.57+02	-1.57+02	-1.57+02	-1.57+02	-1.57+02	-1.57+02	-1.57+02
TMASS	(SLUGS)=	4.01+03	2.55+03	2.52+03	2.25+03	1.89+03	1.58+03	1.47+03	1.43+03

AERODYNAMIC PARAMETERS

MACH	(ND)=	4.52+00	8.07+00	8.38+00	8.76+00	1.09+01	7.86+00	7.12+00	6.99+00
DYN PRESS	(PSF)=	1.68+02	2.79+01	2.04+01	1.35+01	5.08-02	1.94-03	9.33-04	7.89-04
ALPHA	(DEG)=	8.96-02	-1.52-01	4.43-01	1.16+00	3.93+00	6.93+00	7.99+00	8.26+00
BETA	(DEG)=	0.	0.	0.	0.	0.	0.	0.	0.
ZA	(LBS/R)=	7.20+04	1.18+04	8.56+03	5.16+03	1.94+01	7.42-01	3.57-01	3.02-01
YB	(LBS/R)=	7.84+04	1.26+04	9.11+03	4.91+03	1.85+01	7.07-01	3.40-01	2.87-01
DELTAP	(DEG)=	-1.68-01	-1.58-01	-1.83-01	-1.92-01	-1.80-01	-1.93-01	-1.96-01	-1.97-01
DELTAY	(DEG)=	0.	0.	0.	0.	0.	0.	0.	0.
LIFT	(LBS)=	1.66+02	-1.91+01	5.85+01	8.81+01	1.16+00	9.20-02	5.51-02	4.85-02
DRAG	(LBS)=	6.48+02	3.89+02	4.05+03	-3.00+02	-1.13+00	-4.31-02	-2.07-02	-1.75-02

124 Seconds Through Pre-SECO

T=FLIGHT TIME (SEC)		T= 0.	T= 0.5	T= 20.0	T= 40.0	T= 60.0	T= 80.0	T=100.0	T=112.0
REDUCED MASS-INERTIA PARAMETERS									
WT	(LBS)=	3.07+05	3.05+05	2.67+05	2.35+05	2.04+05	1.72+05	1.28+05	1.22+05
MASS	(SLLGS)=	9.53+03	9.48+03	8.29+03	7.31+03	6.33+03	5.35+03	3.99+03	3.79+03
XCG	(SN)=	-7.66+02	-7.66+02	-7.79+02	-7.87+02	-7.91+02	-7.88+02	-7.67+02	-7.62+02
YCG	(IN)=	-3.93-01	-3.95-01	-4.52-01	-5.12-01	-5.52-01	-7.00-01	-9.39-01	-9.87-01
ZCG	(IN)=	-4.26-01	-4.29-01	-4.90-01	-5.56-01	-6.42-01	-7.60-01	-1.02+00	-1.07+00
IXX	(SF2)=	1.47+04	1.47+04	1.47+04	1.47+04	1.47+04	1.47+04	1.47+04	1.47+04
IYY	(SF2)=	4.25+06	4.23+06	3.85+06	3.60+06	3.39+06	3.21+06	2.94+06	2.90+06
IZZ	(SF2)=	4.25+06	4.23+06	3.85+06	3.60+06	3.39+06	3.20+06	2.94+06	2.90+06
IXY	(SF2)=	1.23+04	1.23+04	1.20+04	1.18+04	1.17+04	1.18+04	1.23+04	1.24+04
IXZ	(SF2)=	6.46+03	6.44+03	6.09+03	5.87+03	5.75+03	5.82+03	6.41+03	6.57+03
IYZ	(SF2)=	7.94+02	7.94+02	7.94+02	7.94+02	7.94+02	7.94+02	7.94+02	7.94+02
LAA	(FT)=	4.23+01	4.24+01	4.34+01	4.22+01	3.28+01	3.79+01	3.57+01	3.38+01
LAB	(FT)=	1.39+01	1.39+01	1.49+01	1.55+01	1.28+01	2.45+01	2.52+01	2.43+01
LC	(FT)=	3.72+01	3.71+01	3.61+01	3.54+01	3.51+01	3.53+01	3.70+01	3.75+01

MOMENT EFFECTIVENESS PARAMETERS

MA	(FT-LP/R)=	0.	9.06+01	3.33+05	2.08+06	6.05+06	1.14+07	5.65+06	4.53+06
NB	(FT-LB/R)=	0.	3.94+01	1.52+05	1.02+06	2.69+06	8.20+06	4.46+06	3.61+06
MDEL	(FT-LP/R)=	1.23+07	1.22+07	1.20+07	1.22+07	1.25+07	1.30+07	1.40+07	1.42+07
MUCOP	(R/S2/R)=	2.88+00	2.89+00	3.12+00	3.38+00	3.68+00	4.05+00	4.74+00	4.88+00
MURQP	(R/S2/R)=	0.	2.14-05	8.64-02	5.77-01	1.79+00	3.55+00	1.92+00	1.56+00
MUPQP(1)	(R/S2/R)=	3.30-02	3.72-02	7.11-02	7.02-02	6.26-02	4.39-02	-2.12-02	-3.82-02
MUPFP(1)	(R/S2/R)=	-2.57-02	-2.71-02	-5.13-02	-7.02-02	-9.60-02	-1.33-01	-2.39-01	-2.57-01
MUPQP(2)	(R/S2/R)=	3.83-02	3.87-02	5.00-02	6.28-02	7.80-02	9.56-02	1.40-01	1.47-01
MUPFP(2)	(R/S2/R)=	9.70-03	9.81-03	1.26-02	1.57-02	1.94-02	2.39-02	3.55-02	3.74-02
MUCQY	(R/S2/R)=	2.88+00	2.89+00	3.12+00	3.38+00	3.68+00	4.06+00	4.75+00	4.88+00
MURQY	(R/S2/R)=	0.	9.32-06	2.95-02	2.83-01	7.95-01	2.56+00	1.51+00	1.24+00
MUPQY(1)	(R/S2/R)=	3.30-02	3.72-02	7.12-02	7.02-02	6.26-02	4.39-02	-2.12-02	-3.82-02
MUPFY(1)	(R/S2/R)=	-2.57-02	-2.71-02	-5.13-02	-7.02-02	-9.60-02	-1.33-01	-2.39-01	-2.57-01
MUPQY(2)	(R/S2/R)=	3.83-02	3.87-02	5.00-02	6.29-02	7.80-02	9.57-02	1.40-01	1.47-01
MUPFY(2)	(R/S2/R)=	9.70-03	9.81-03	1.26-02	1.57-02	1.94-02	2.39-02	3.55-02	3.74-02
RATQF	(ND)=	0.	7.40-06	2.77-02	1.71-01	4.85-01	8.76-01	4.04-01	3.20-01
RATQY	(ND)=	0.	3.22-06	1.26-02	8.38-02	2.16-01	6.31-01	3.19-01	2.55-01

DYNAMIC STABILITY PARAMETERS

DEL P	(DEG)=	-5.48-02	-5.52-02	-6.48-02	-7.49-02	-8.74-02	-1.03-01	-1.31-01	-1.36-01
DEL Y	(DEG)=	-5.05-02	-5.08-02	-5.97-02	-6.90-02	-8.06-02	-9.47-02	-1.21-01	-1.26-01
DEL T	(DEG)=	7.45-02	7.50-02	8.81-02	1.02-01	1.19-01	1.40-01	1.79-01	1.85-01
OMFGAO(1)	(R/S)=	4.68+00	4.57+00	3.98+00	4.27+00	4.60+00	4.96+00	5.90+00	6.04+00
OMEGAF(1)	(R/S)=	4.68+00	4.60+00	3.98+00	4.27+00	4.60+00	4.96+00	5.84+00	5.96+00
OMEGAO(2)	(R/S)=	5.59+00	5.60+00	5.99+00	6.43+00	6.91+00	7.47+00	8.88+00	9.09+00
OMEGAF(2)	(R/S)=	3.83+00	3.84+00	4.11+00	4.41+00	4.74+00	5.12+00	6.09+00	6.24+00

Launch Through 112 Seconds

T=FLIGHT TIME (SEC)		T=124.0	T=153.6	T=156.7	T=160.5	T=199.5	T=229.0	T=242.5	T=246.5
		REDUCED MASS-INERTIA PARAMETERS							
WT	(LBS)=	1.04+05	6.17+04	6.10+04	5.30+04	4.76+04	4.30+04	4.13+04	4.08+04
MASS	(SLUGS)=	3.23+03	1.52+03	1.90+03	1.65+03	1.48+03	1.34+03	1.28+03	1.27+03
XCG	(SN)=	-7.40+02	-6.10+02	-6.07+02	-5.17+02	-4.87+02	-4.80+02	-4.60+02	-4.54+02
YCG	(IN)=	-1.16+00	-1.95+00	-1.97+00	-9.64-C1	-1.18+00	-1.36+00	-1.42+00	-1.44+00
ZCG	(IN)=	-1.26+00	-2.12+00	-2.14+00	-2.20+00	-2.43+00	-2.65+00	-2.77+00	-2.80+00
IXX	(SF2)=	1.47+04	1.47+04	1.47+04	9.53+03	8.53+03	7.41+03	7.41+03	7.41+03
IYY	(SF2)=	2.77+06	2.05+06	2.04+06	1.32+06	1.13+06	9.28+05	8.40+05	8.14+05
IZZ	(SF2)=	2.77+06	2.05+06	2.03+06	1.32+06	1.13+06	9.27+05	8.39+05	8.13+05
IXY	(SF2)=	1.30+04	1.64+04	1.65+04	8.53+03	8.68+03	8.59+03	8.84+03	8.91+03
IXZ	(SF2)=	7.18+03	1.09+04	1.10+04	1.15+04	1.23+04	1.25+04	1.30+04	1.32+04
IYZ	(SF2)=	7.94+02	7.94+02	7.94+02	6.27+02	6.34+02	6.10+02	6.10+02	6.10+02
LAA	(FT)=	2.82+01	1.30+01	1.25+01	9.40+00	6.88+00	6.29+00	4.64+00	4.17+00
LAB	(FT)=	2.10+01	7.38+00	7.01+00	8.53+00	6.01+00	5.41+00	3.77+00	3.30+00
LC	(FT)=	3.93+01	5.02+01	5.05+01	5.77+01	6.03+01	6.09+01	6.25+01	6.30+01

MOMENT EFFECTIVENESS PARAMETERS

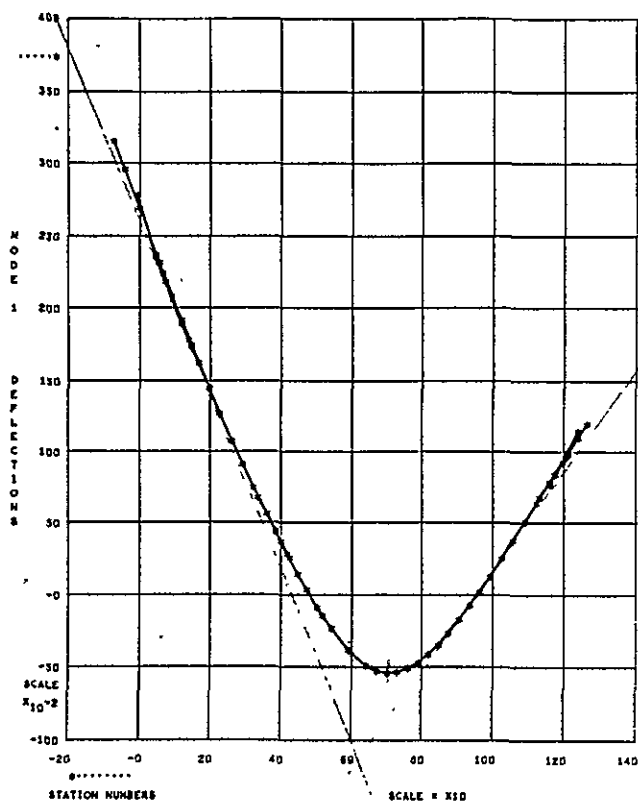
MA	(FT-LB/R)=	2.03+06	1.53+05	1.07+05	4.85+04	1.34+02	4.66+00	1.65+00	1.26+00
NB	(FT-LB/R)=	1.65+06	9.27+04	6.38+04	4.19+04	1.11+02	3.82+00	1.28+00	9.48-01
MDEL	(FT-LB/R)=	1.49+07	1.51+07	4.05+06	4.68+06	4.87+06	4.89+06	5.05+06	5.09+06
MUCOP	(R/S2/R)=	5.38+00	9.33+00	2.01+00	3.55+00	4.31+00	5.27+00	6.02+00	6.25+00
MURCP	(R/S2/R)=	7.32-01	7.47-02	5.27-02	3.67-02	1.18-04	5.03-06	1.97-06	1.55-06
MUPCP(1)	(R/S2/R)=	-1.09-01	-5.68-01	-1.05-01	-2.23-C1	-1.66-C1	-3.59-02	6.24-04	0.
MUPFP(1)	(R/S2/R)=	-3.09-01	-7.06-01	-1.30-01	-2.42-01	-2.23-01	-1.57-01	-9.26-02	-6.56-02
MUPCP(2)	(R/S2/R)=	1.69-01	2.40-C1	4.47-C2	4.71-02	5.34-02	7.32-02	7.36-02	7.35-02
MUPFP(2)	(R/S2/R)=	4.37-02	7.16-02	1.24-02	1.72-02	2.18-02	3.08-02	3.44-02	3.55-02
MUCOY	(R/S2/R)=	5.38+00	9.34+00	2.01+00	3.55+00	4.31+00	5.27+00	6.02+00	6.26+00
MURCY	(R/S2/R)=	5.95-01	4.52-C2	3.14-C2	3.18-C2	9.86-C5	4.13-06	1.52-06	1.17-06
MUPCY(1)	(R/S2/R)=	-1.10-01	-5.69-01	-1.05-01	-2.23-C1	-1.66-C1	-3.59-02	6.24-04	0.
MUPFY(1)	(R/S2/R)=	-3.09-01	-7.07-C1	-1.30-C1	-2.42-C1	-2.23-01	-1.57-01	-9.27-02	-6.97-02
MUPCY(2)	(R/S2/R)=	1.69-01	2.41-01	4.48-02	4.71-C2	5.34-02	7.32-C2	7.37-02	7.36-02
MUPFY(2)	(R/S2/R)=	4.37-02	7.17-02	1.34-02	1.72-02	2.18-02	3.08-C2	3.44-02	3.56-02
RATDP	(ND)=	1.36-C1	8.01-02	2.62-C2	1.04-02	2.75-05	9.53-07	3.27-07	2.47-07
RATCY	(ND)=	1.11-01	4.84-02	1.56-02	8.95-03	2.28-05	7.82-C7	2.53-07	1.86-07

DYNAMIC STABILITY PARAMETERS

DEL P	(DEG)=	-1.53-01	-2.02-01	-2.03-01	-1.82-01	-1.92-01	-2.08-01	-2.11-01	-2.12-01
DEL Y	(DEG)=	-1.41-01	-1.86-01	-1.87-01	-7.97-C2	-9.35-C2	-1.07-01	-1.08-01	-1.09-01
DEL T	(DEG)=	2.08-01	2.74-01	2.76-01	1.98-C1	2.14-C1	2.34-01	2.38-01	2.39-01
OMEGA(1)	(R/S)=	6.51+00	7.32+00	3.12+00	3.16+00	2.54+00	1.57+00	1.20+00	7.59-01
OMEGA(1)	(R/S)=	6.29+00	6.88+00	2.96+00	3.03+00	3.22+00	3.88+00	4.60+00	4.92+00
OMEGA(2)	(R/S)=	9.80+00	1.24+01	5.35+00	5.51+00	6.02+00	6.58+00	6.85+00	6.93+00
OMEGA(2)	(R/S)=	6.72+00	8.48+00	3.67+00	3.78+00	4.13+00	4.51+00	4.70+00	4.75+00

124 Seconds Through Pre-SECO

MD*5900 *RJR *1*00 FREE MCDES SLV-3C AC-13



T=LAUNCH

MODE 1

T=LAUNCH

TIME (SEC) = 00

GENERALIZED MASS (SLUGS) = 3.1710E 03

FREQUENCY (RAD/SEC) = 1.3463E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 951.0

FIRST MCDE ANTINCODE (SN) = 709.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.2421E-01

RATE GYRO LOCATION = -3.5557E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 9.7693E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.5677E 00

RATE GYRO LOCATION = 1.8808E 00

BOOSTER ENGINE GIMBAL POINT = -2.9985E 00

SUSTAINER ENGINE GIMBAL POINT = -2.6773E 00

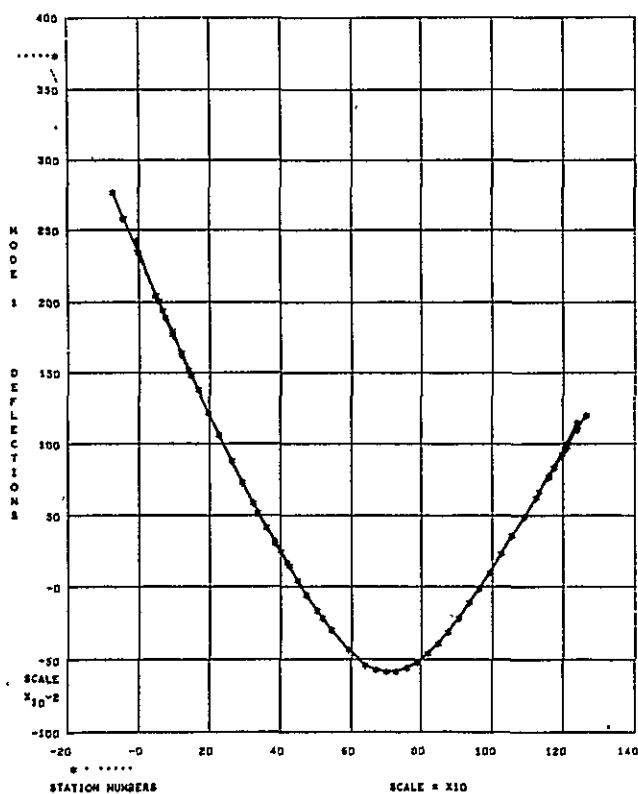
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 3.4549E-01

SUSTAINER ENGINE = 1.0229E 00

MD*5900 *RJR *1*040FREE MCDES SLV-3C AC-13*



T= 40.

MODE 1

T= 40.

TIME (SEC) = 040

GENERALIZED MASS (SLUGS) = 2.7402E 03

FREQUENCY (RAD/SEC) = 1.3524E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 951.0

FIRST MCDE ANTINCODE (SN) = 709.7

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 9.1554E-02

RATE GYRO LOCATION = -4.1283E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 9.7536E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.6524E 00

RATE GYRO LOCATION = 1.7529E 00

BOOSTER ENGINE GIMBAL POINT = -3.1252E 00

SUSTAINER ENGINE GIMBAL POINT = -2.7770E 00

* * *

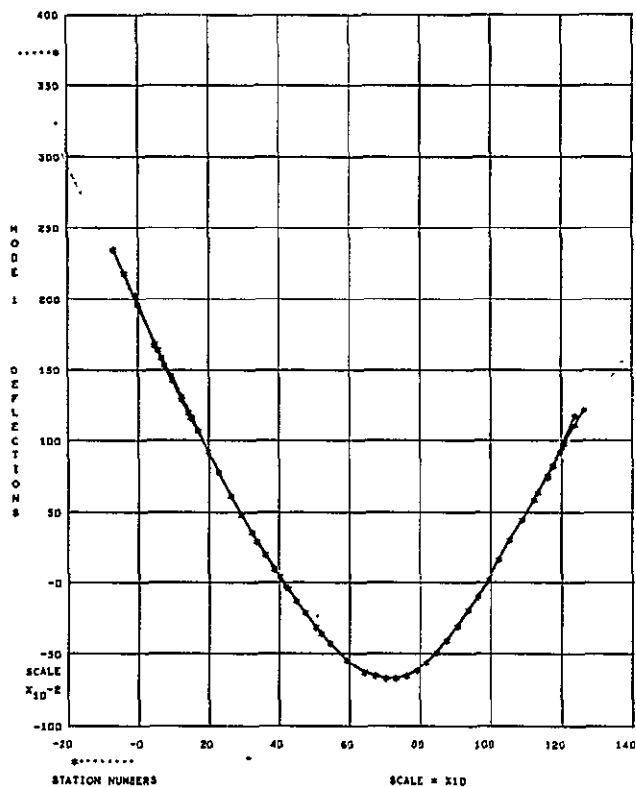
ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 3.7635E-01

SUSTAINER ENGINE = 1.1062E 00

*5900-8

MD*5900 *RJR *1*683 FREE MODES SLV-3C AC-13



T= 80.

MODE 1 T= 80.

TIME (SEC) = 189

GENERALIZED MASS (SLUGS) = 2.0849E 03

FREQUENCY (RAD/SEC) = 1.5581E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

FIRST MODE ANTINODE (SN) = 715.7

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.4170E-02

RATE GYRO LOCATION = -5.2469E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 9.6575E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.8257E 00

RATE GYRO LOCATION = 1.4879E 00

BOOSTER ENGINE GIMBAL POINT = -2.4673E 00

SUSTAINER ENGINE GIMBAL POINT = -3.0148E 00

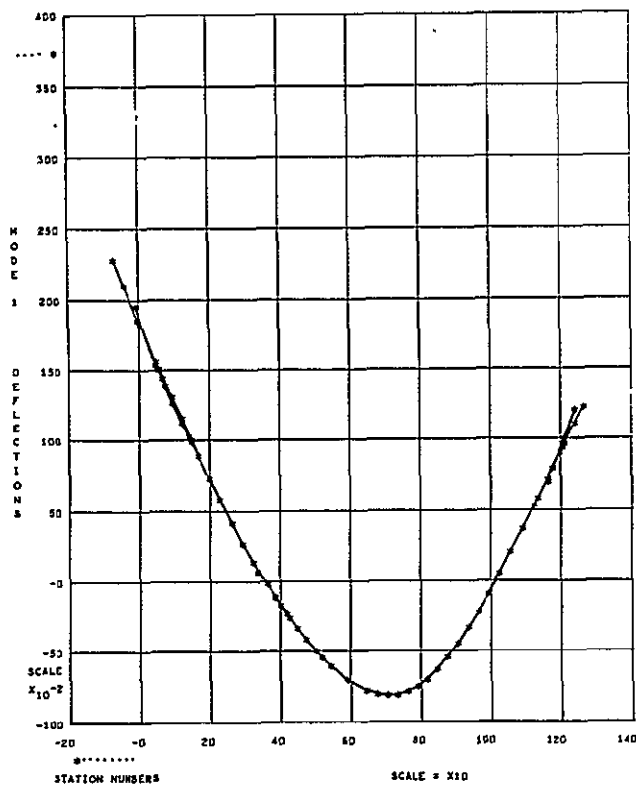
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ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 4.9627E-01

SUSTAINER ENGINE = 1.4315E 00

MD*5900 *RJR *1*112 FREE MODES SLV-3C AC-13



T=112.

MODE 1 T=112.

TIME (SEC) = 112

GENERALIZED MASS (SLUGS) = 1.6170E 03

FREQUENCY (RAD/SEC) = 1.8520E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

FIRST MODE ANTINODE (SN) = 705.6

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -5.7080E-02

RATE GYRO LOCATION = -6.9516E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 9.5791E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -3.0633E 00

RATE GYRO LOCATION = 1.3214E 00

BOOSTER ENGINE GIMBAL POINT = -4.0454E 00

SUSTAINER ENGINE GIMBAL POINT = -3.2624E 00

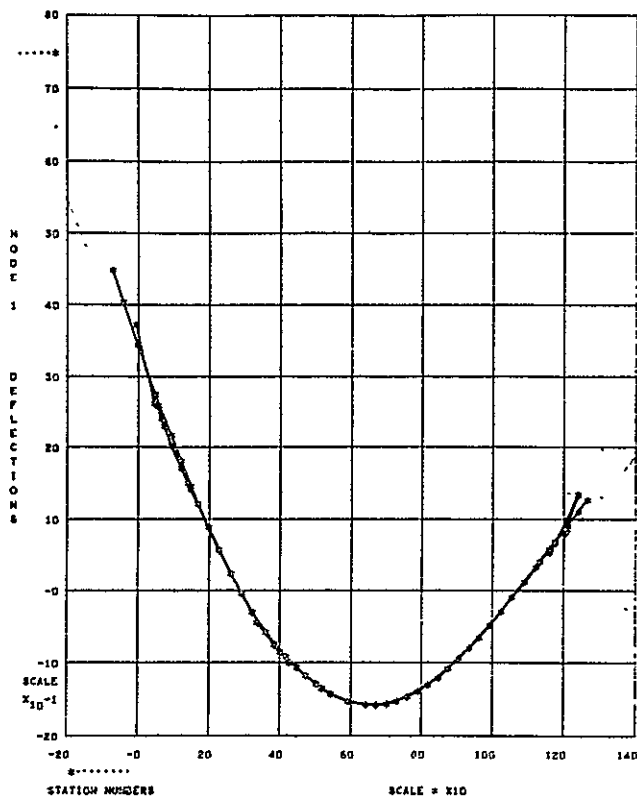
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 7.6596E-01

SUSTAINER ENGINE = 2.1436E 00

MD*5900*BJR *1*153FREE MODES SLV-3C AC-13



MODE 1 *BECO*T=153.

TIME (SEC) = 153

GENERALIZED MASS (SLUGS) = 2.1664E 03

FREQUENCY (RAD/SEC) = 2.5890E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

FIRST MODE ANTINODE (SN) = 658.9

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -4.9238E-01

RATE GYRO LOCATION = -1.5155E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 9.0340E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -4.0037E 00

RATE GYRO LOCATION = 1.2435E 00

BOOSTER ENGINE GIMBAL POINT = -6.2880E 00

SUSTAINER ENGINE GIMBAL POINT = -4.5774E 00

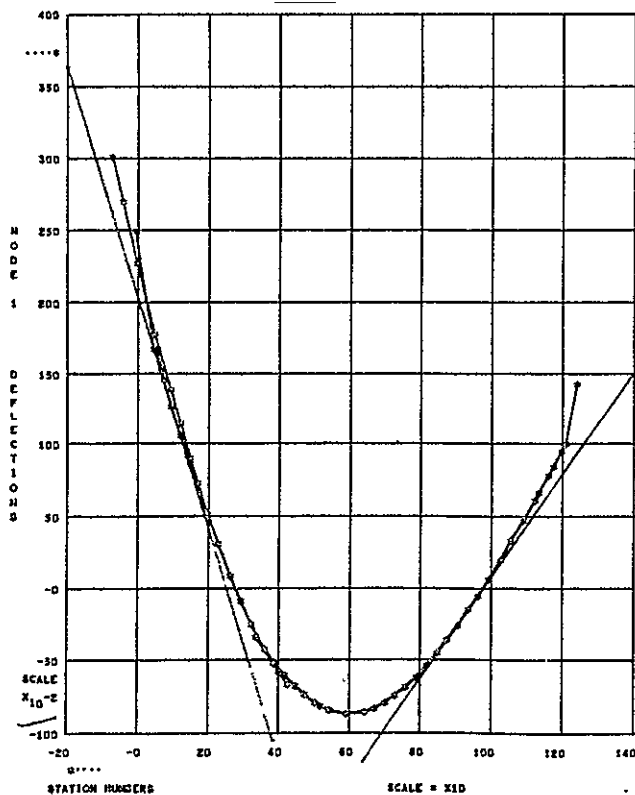
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ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 2.0188E 00

SUSTAINER ENGINE = 5.6983E 01

MD*5900*BJR *1*156FREE MODES SLV-3C AC-13*WITH SLOSH IN



MODE 1 *BPJ *T=156.

TIME (SEC) = 156

GENERALIZED MASS (SLUGS) = 2.1603E 02

FREQUENCY (RAD/SEC) = 2.8633E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

FIRST MODE ANTINODE (SN) = 603.4

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 6.0743E-02

RATE GYRO LOCATION = -8.6970E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.7541E 00

RATE GYRO LOCATION = 2.1839E-01

BOOSTER ENGINE GIMBAL POINT = 0

SUSTAINER ENGINE GIMBAL POINT = -3.1772E 00

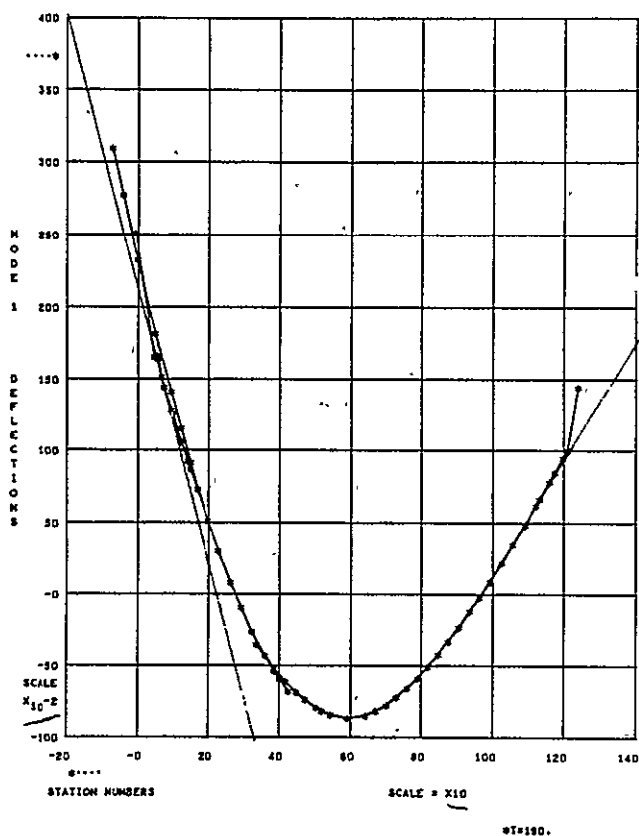
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ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = 6.6137E 00

MD*5900 *RJR *1*19CFREE MODELS SLV-3C AC-13



MODE 1 *IPJ *T=190.

TIME (SEC) = 191

GENERALIZED MASS (SLUGS) = 7.9402E 02

FREQUENCY (RAD/SEC) = 2.9348E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.1

FIRST MODE ANTINODE (SN) = 595.3

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.0623E 00

RATE GYRO LOCATION = -8.1071E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 5.2652E 00

RATE GYRO LOCATION = 1.3135E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -3.1149E 00

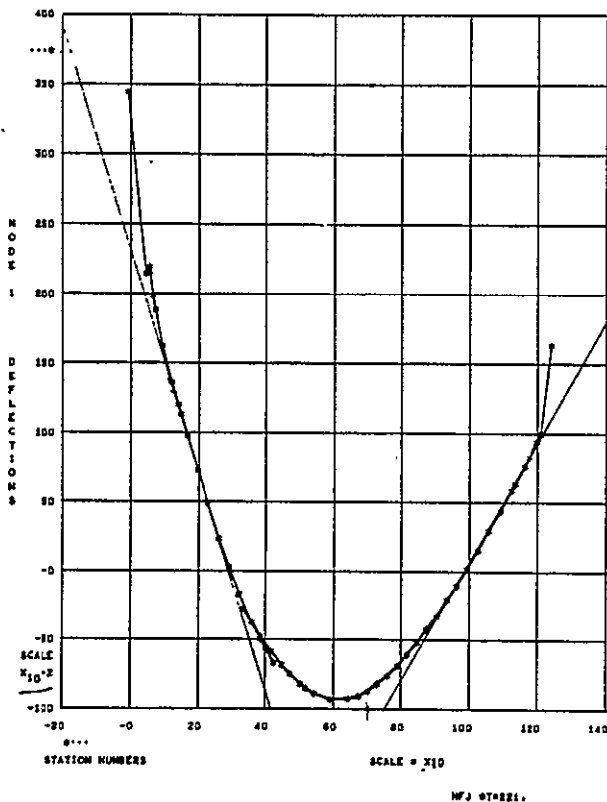
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ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = 7.0822E 00

MD*5900 *RJR *1*221FREE MODES SLV-3C AC-13



MODE 1 *NFJ *T=221.

TIME (SEC) = 221

GENERALIZED MASS (SLUGS) = 7.5035E 02

FREQUENCY (RAD/SEC) = 3.3643E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

FIRST MODE ANTINODE (SN) = 615.9

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.3616E 00

RATE GYRO LOCATION = -9.2646E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 6.3449E 00

RATE GYRO LOCATION = 3.9556E-01

BOOSTER ENGINE GIMBAL POINT = 0.

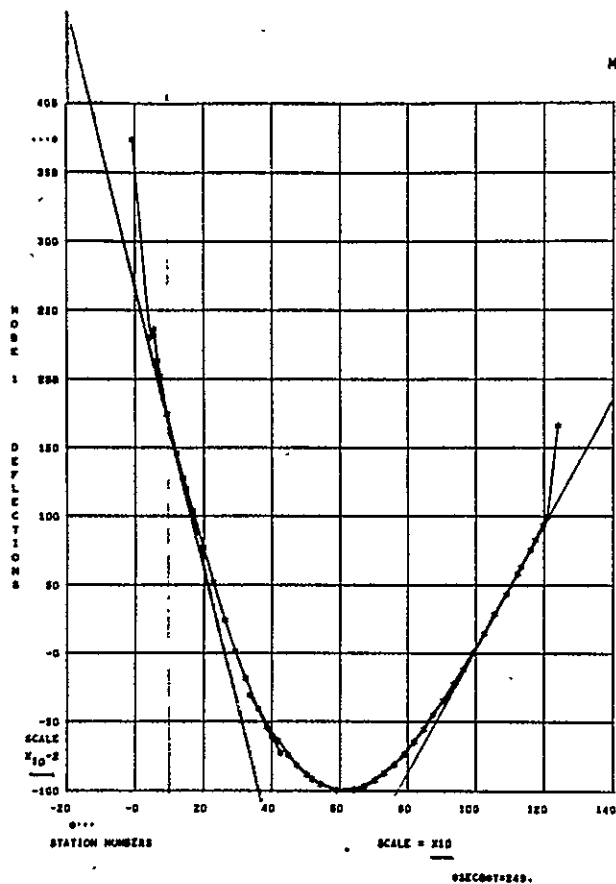
SUSTAINER ENGINE GIMBAL POINT = -3.4741E 00

* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = 1.1274E 01



MD*5900 *RJR *1*249FREE MODES SLV-3C AC-13*

*SECOT=249.

MODE 1

TIME (SEC) = 249

GENERALIZED MASS (SLUGS) = 8.3557E 02

FREQUENCY (RAD/SEC) = 3.3586E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

FIRST MODE ANTINODE (SN) = 612.3

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.4601E 00

RATE GYRO LOCATION = -5.6856E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 6.8714E 00

RATE GYRO LOCATION = 3.7604E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -3.5310E 00

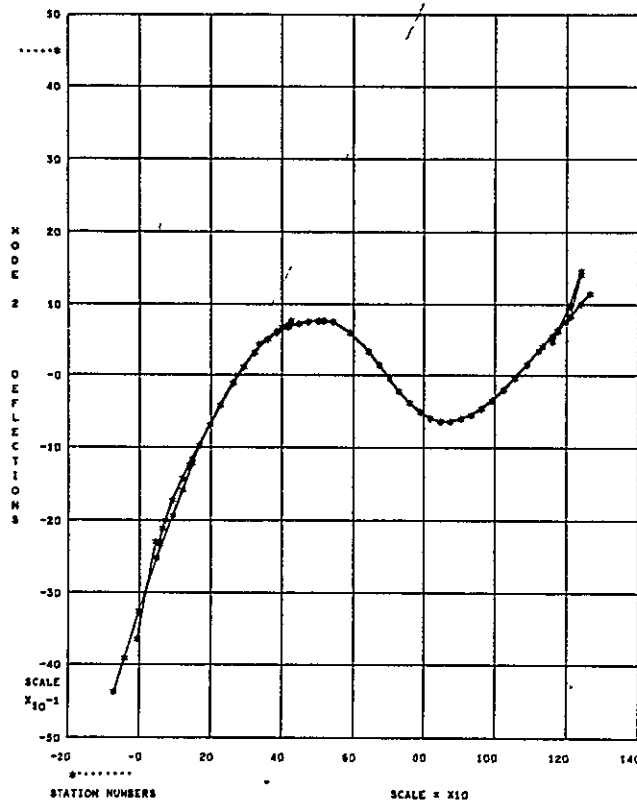
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = 1.1737E 01

MD#5900 *RJR *I*GO FREE MCDES SLV-3C AC-13



T=LAUNCH

MODE 2 T=LAUNCH

TIME (SEC) = 00

GENERALIZED MASS (SLUGS) = 3.2567E 03

FREQUENCY (RAD/SEC) = 3.2267E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -3.5071E-01

RATE GYRO LOCATION = 6.3166E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 8.4424E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.9032E 00

RATE GYRO LOCATION = 2.5987E 00

BOOSTER ENGINE GIMBAL POINT = -7.0782E 00

SUSTAINER ENGINE GIMBAL POINT = -3.9841E 00

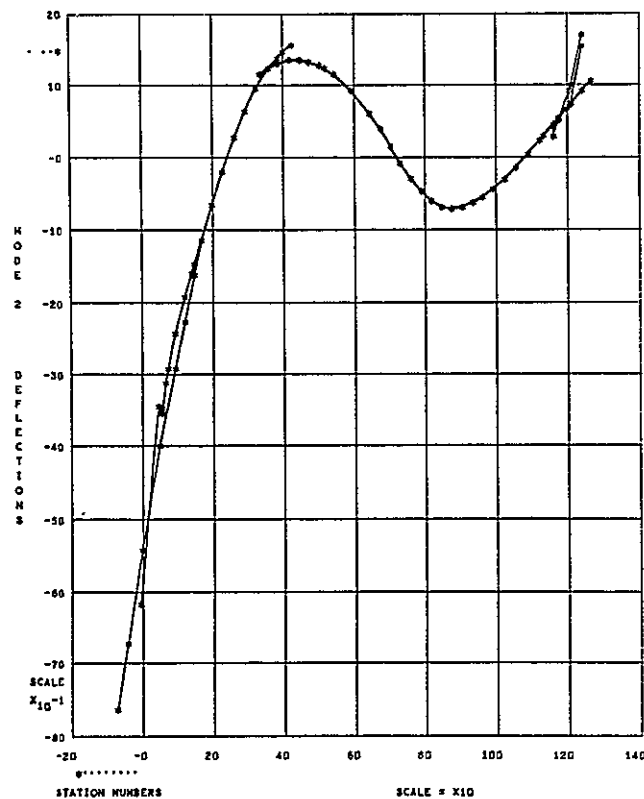
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 3.7409E 00

SUSTAINER ENGINE = 5.0407E 00

MD#5900 *RJR *I*D4)FREE MCDES SLV-3C AC-13*WITH SLOSH IN



T= 40.

MODE 2 T= 40.

TIME (SEC) = 00

GENERALIZED MASS (SLUGS) = 5.6438E 03

FREQUENCY (RAD/SEC) = 3.7290E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -4.5408E-01

RATE GYRO LOCATION = 5.6442E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 7.4246E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.6537E 00

RATE GYRO LOCATION = 3.5685E 00

BOOSTER ENGINE GIMBAL POINT = -9.4898E 00

SUSTAINER ENGINE GIMBAL POINT = -4.1867E 00

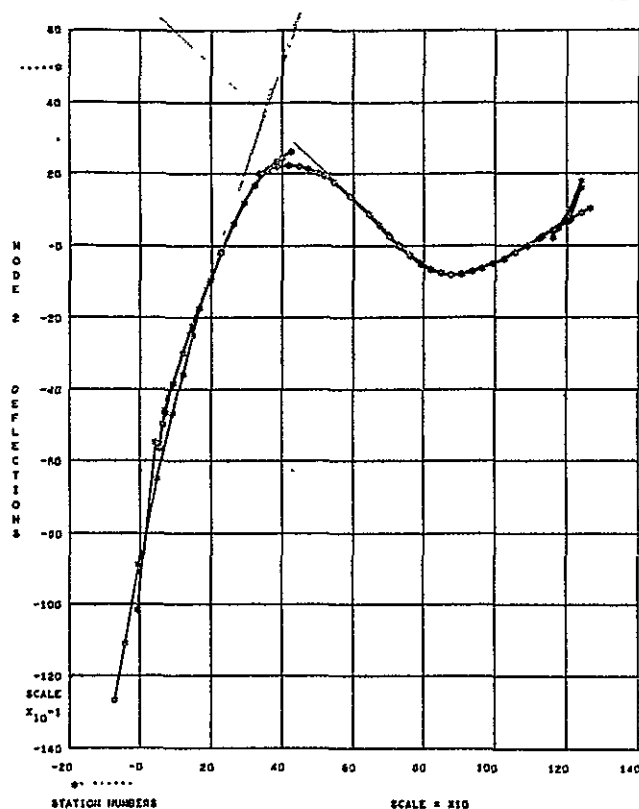
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 6.5562E 00

SUSTAINER ENGINE = 1.4277E 01

MD*5900.*RJR *1*080FREE MODES SLV-3C AC-13



MODE 2 T= 80.

TIME (SEC) = 080

GENERALIZED MASS (SLUGS) = 1.0619E 04

FREQUENCY (RAD/SEC) = 3.8448E 01

RATE CYRC LOCATION (SN) = 583.7

DISPLACEMENT CYRC LOCATION (SN) = 551.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -5.0521E-01

RATE GYRO LOCATION = 1.4380E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 7.0502E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.7828E 00

RATE GYRO LOCATION = 6.1053E 00

BOOSTER ENGINE GIMBAL POINT = -1.0378E 01

SUSTAINER ENGINE GIMBAL POINT = -4.2623E 00

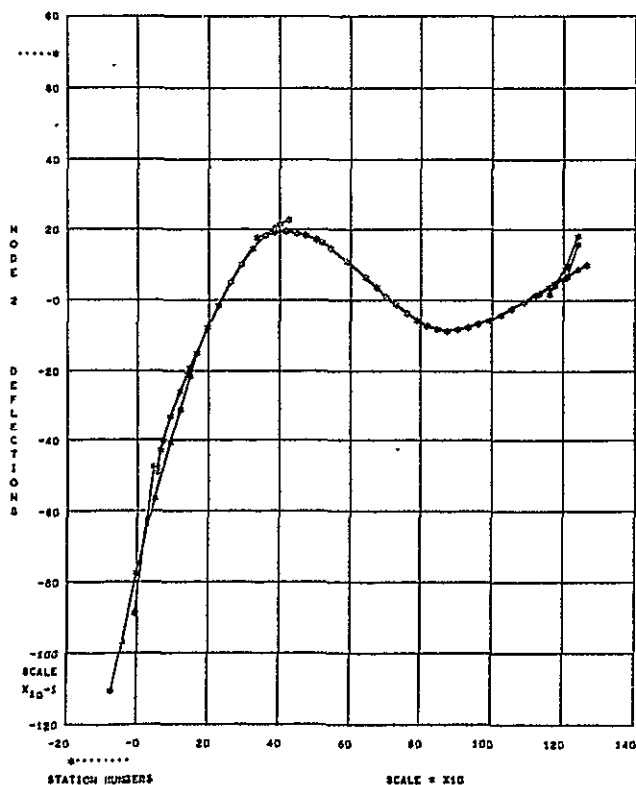
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 7.6524E 00

SUSTAINER ENGINE = 1.5894E 01

MD*5900.*RJR *1*112FREE MODES SLV-3C AC-13



MODE 2 T=112.

TIME (SEC) = 112

GENERALIZED MASS (SLUGS) = 8.4615E 03

FREQUENCY (RAD/SEC) = 3.8714E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 551.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -5.5560E-01

RATE GYRO LOCATION = 1.1786E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 6.9160E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.9234E 00

RATE GYRO LOCATION = 5.5426E 00

BOOSTER ENGINE GIMBAL POINT = -1.0807E 01

SUSTAINER ENGINE GIMBAL POINT = -4.4076E 00

* * *

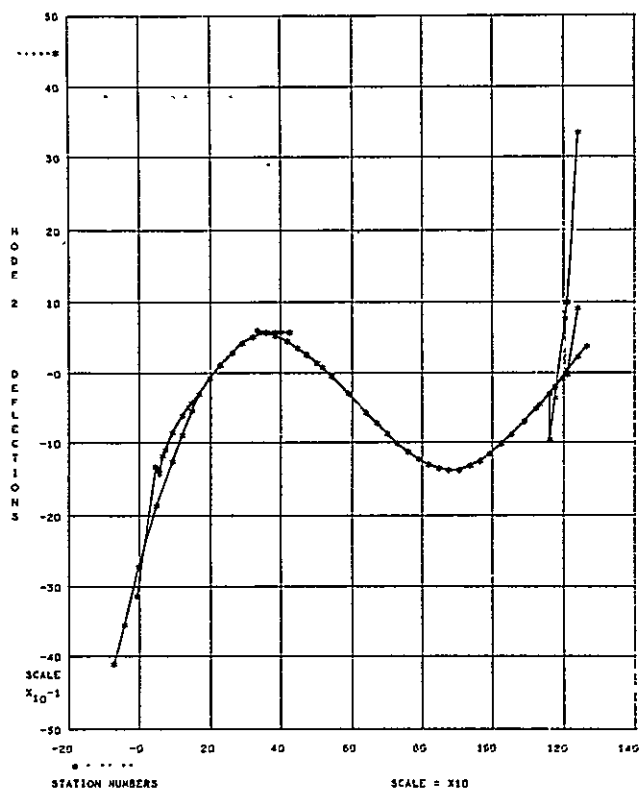
ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 8.0271E 00

SUSTAINER ENGINE = 1.6402E 01

PD*6900 *RJR *1*153FREE HCGES SLV-3C AC-13

*BECO*T=153.



MODE 2

TIME (SEC) = 153

GENERALIZED MASS (SLUGS) = 3.0867E 03

FREQUENCY (RAD/SEC) = 4.5965E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.1590E 00

RATE GYRO LOCATION = -2.5391E 01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = -1.3025E 02

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.4755E 00

RATE GYRO LOCATION = 3.6871E 00

BOOSTER ENGINE GIMBAL POINT = -2.6156E 01

SUSTAINER ENGINE GIMBAL POINT = -4.2209E 00

* * *

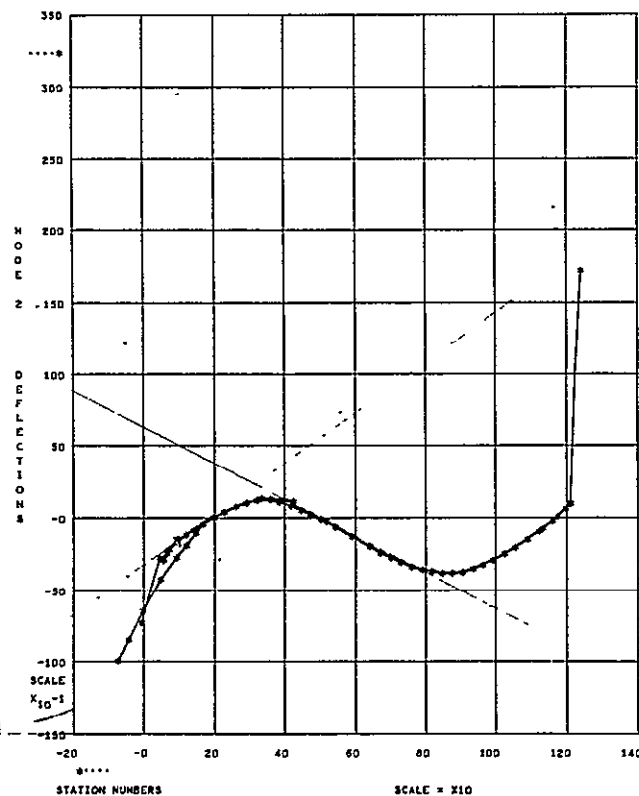
ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 2.7877E 01

SUSTAINER ENGINE = 1.7043E 01

PD*6900 *RJK *1*150FREE HCGES SLV-3C AC-13

*BPJ *T=150.



MODE 2

TIME (SEC) = 150

GENERALIZED MASS (SLUGS) = 2.5061E 04

FREQUENCY (RAD/SEC) = 4.6995E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -2.9091E 00

RATE GYRO LOCATION = -1.1459E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -8.2366E 00

RATE GYRO LOCATION = 9.7227E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -2.0557E 01

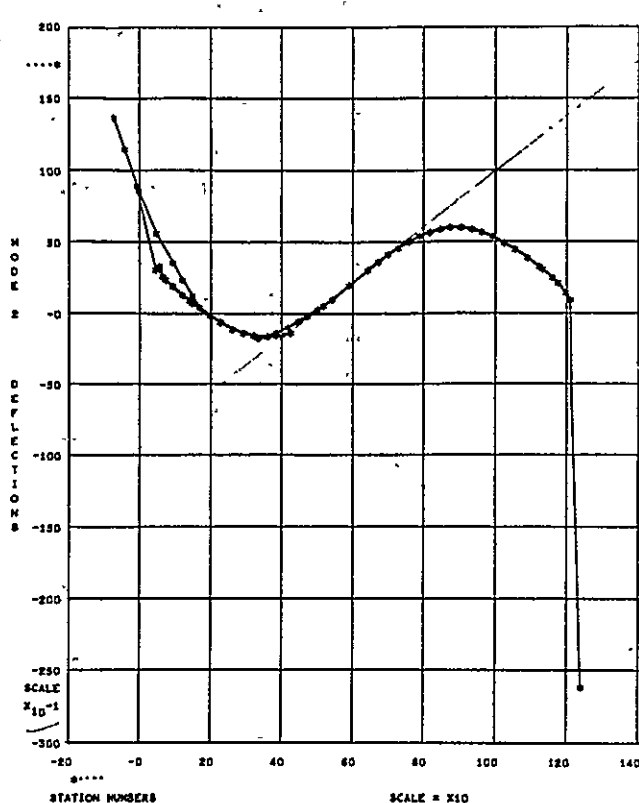
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

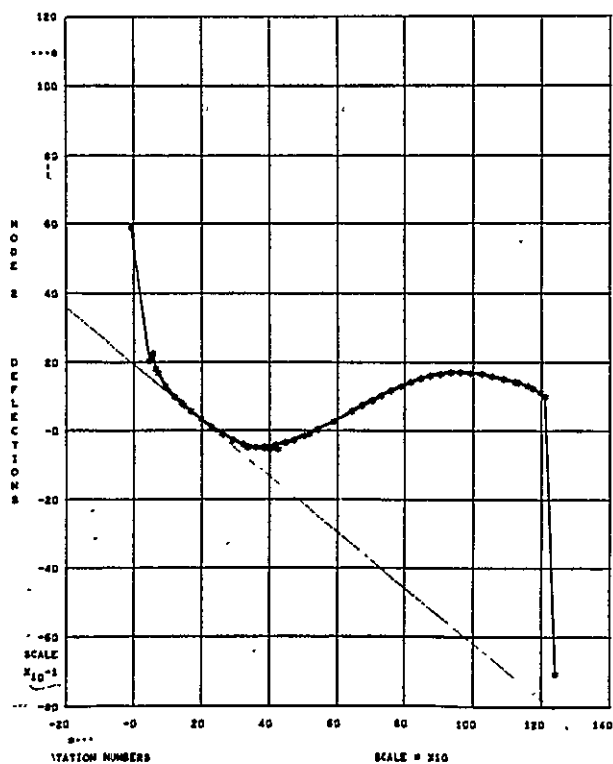
SUSTAINER ENGINE = 3.5281E 02

MD*5900,*RJK *1*190FREE MODES SLV-3C AC-13



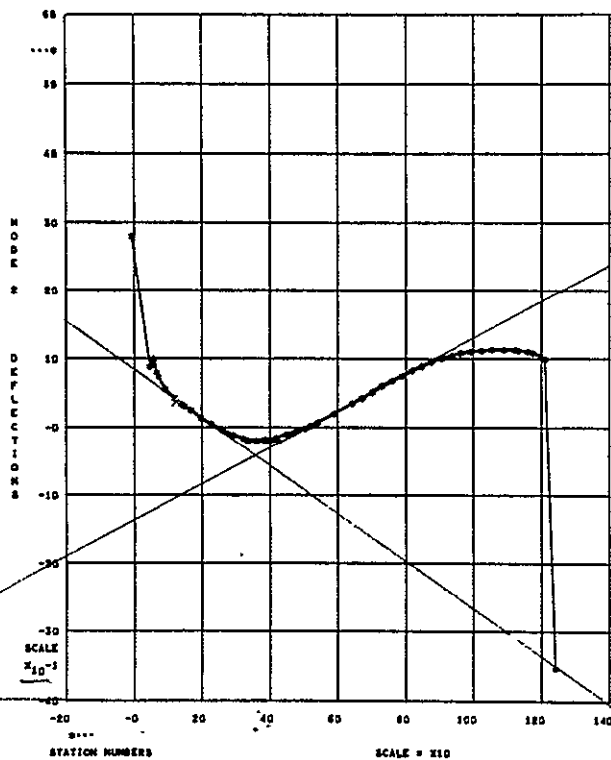
T=190.

MD*5900,*RJK *1*221FREE MODES SLV-3C AC-13



T=221.

MD#5900 *RJR *1*249FREE MODES SLV-3C AC-13



T=249.

MODE 2 *SECO*T=249.

TIME (SEC) = 249

GENERALIZED MASS (SLUGS) = 1.3268E 03

FREQUENCY (RAD/SEC) = 5.3585E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 4.1806E-01

RATE GYRO LOCATION = 1.7623E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 3.2157E 00

RATE GYRO LOCATION = -1.8426E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 2.3196E 00

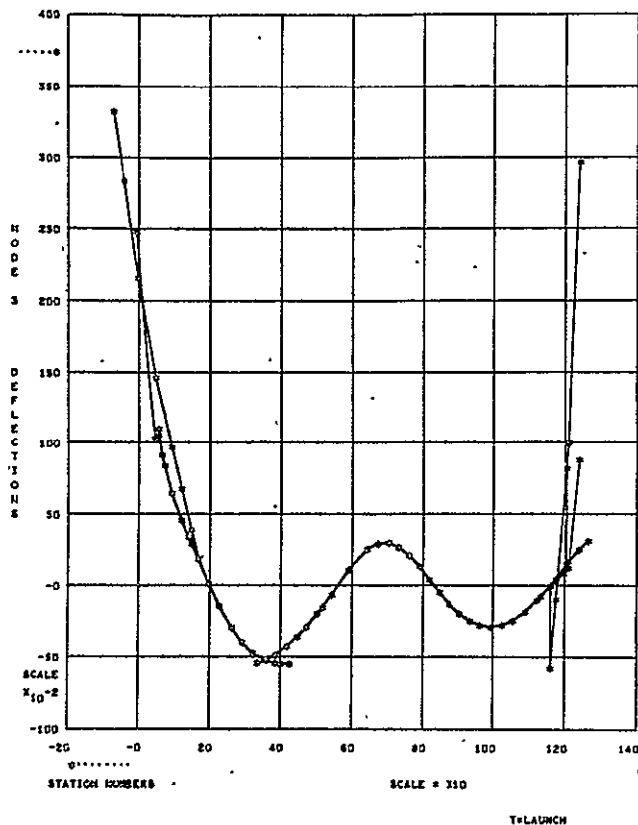
* * *

ENGINE SLOPE-COUPPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = -1.0185E 02

MD*5800*BJR *1*00 FREE MODES SLV-3C AC-13



MODE 3 T=LAUNCH

TIME (SEC) = 00

GENERALIZED MASS (SLUGS) = 2.1226E 03

FREQUENCY (RAD/SEC) = 4.6367E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -2.8888E-01

RATE GYRO LOCATION = 8.0488E-02

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 1.2058E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 9.6893E-02

RATE GYRO LOCATION = -2.2991E 00

BOOSTER ENGINE GIMBAL POINT = -2.1895E 01

SUSTAINER ENGINE GIMBAL POINT = -1.9886E 00

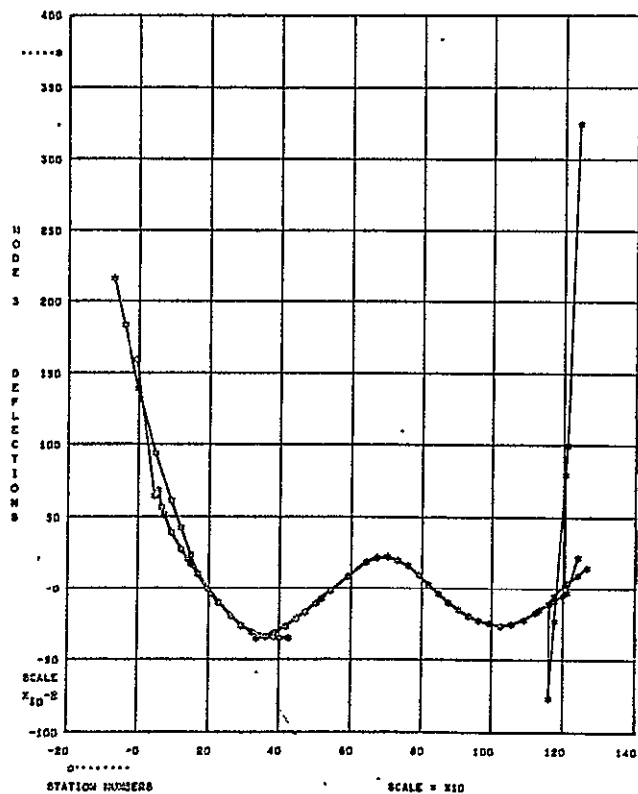
* * *

ENGINE SLOPE-COUPLED TERMS -- (DEG/FT)

BOOSTER ENGINE = 2.4187E 01

SUSTAINER ENGINE = 1.5429E 01

MD*5800*BJR *1*040 FREE MODES SLV-3C AC-13



MODE 3 T= 40.

TIME (SEC) = 040

GENERALIZED MASS (SLUGS) = 1.9886E 03

FREQUENCY (RAD/SEC) = 4.7071E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -2.4845E-01

RATE GYRO LOCATION = 6.7635E-02

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = -3.6281E-02

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 4.4766E-01

RATE GYRO LOCATION = -1.4898E 00

BOOSTER ENGINE GIMBAL POINT = -2.3615E 01

SUSTAINER ENGINE GIMBAL POINT = -1.1838E 00

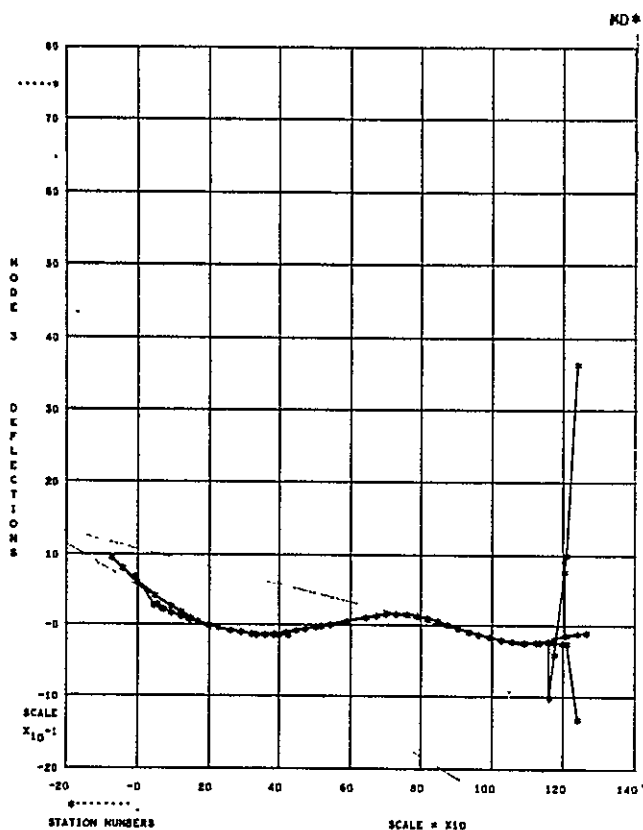
* * *

ENGINE SLOPE-COUPLED TERMS -- (DEG/FT)

BOOSTER ENGINE = 2.6082E 01

SUSTAINER ENGINE = 4.6413E 00

T= 40.



T=80.

MODE 3

T=80.

TIME (SEC) = 080

GENERALIZED MASS (SLUGS) = 2.3604E 03

FREQUENCY (RAD/SEC) = 4.7881E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.6314E-01

RATE GYRO LOCATION = 5.3245E-02

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = -2.5819E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 8.4160E-01

RATE GYRO LOCATION = -7.1925E-01

BOOSTER ENGINE GIMBAL POINT = -2.6956E 01

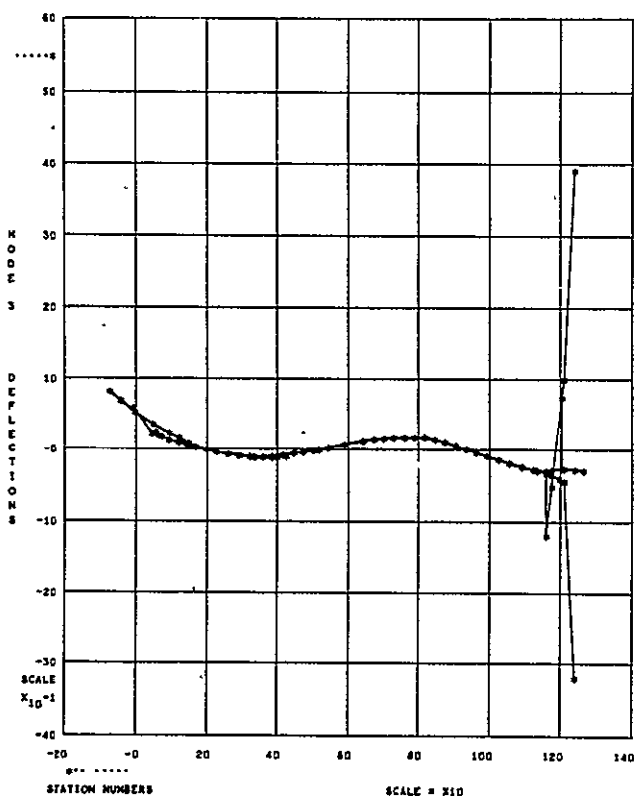
SUSTAINER ENGINE GIMBAL POINT = 4.6988E-01

* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 3.3559E 01

SUSTAINER ENGINE = -2.3940E 01



T=112.

MODE 3

T=112.

TIME (SEC) = 112

GENERALIZED MASS (SLUGS) = 3.2485E 03

FREQUENCY (RAD/SEC) = 4.8379E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -8.9531E-02

RATE GYRO LOCATION = 6.0568E-02

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = -4.4623E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 1.1730E 00

RATE GYRO LOCATION = -6.6083E-01

BOOSTER ENGINE GIMBAL POINT = -2.9291E 01

SUSTAINER ENGINE GIMBAL POINT = 2.2183E 00

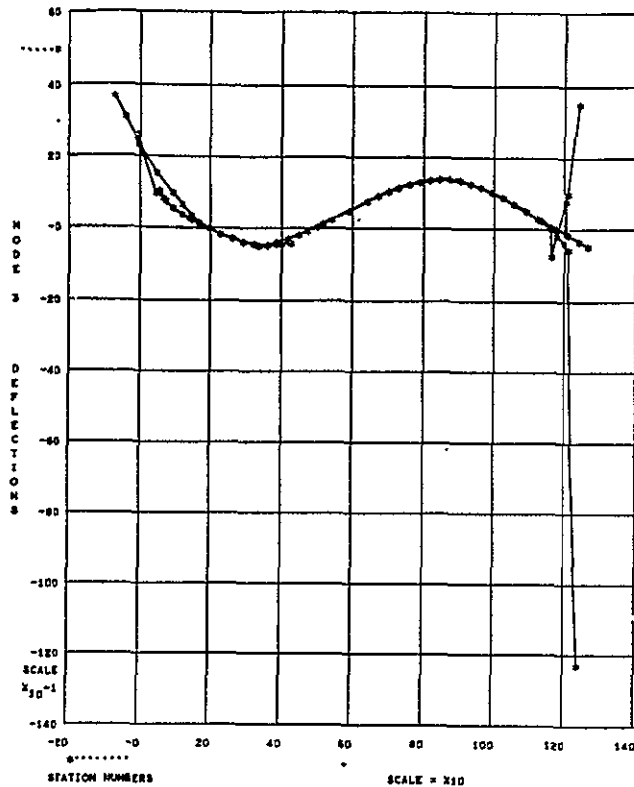
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 3.7565E 01

SUSTAINER ENGINE = -6.1451E 01

MD*5900*BJR *1*153FREE MODES SLV-3C AC-13



MODE 3 *BECD*T=153.

TIME (SEC) = 153

GENERALIZED MASS (SLUGS) = 1.2015E 04

FREQUENCY (RAD/SEC) = 4.9527E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.0493E 00

RATE GYRO LOCATION = 4.4854E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = -5.7175E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 3.1841E 00

RATE GYRO LOCATION = -3.5840E 00

BOOSTER ENGINE GIMBAL POINT = -2.3162E 01

SUSTAINER ENGINE GIMBAL POINT = 1.0872E 01

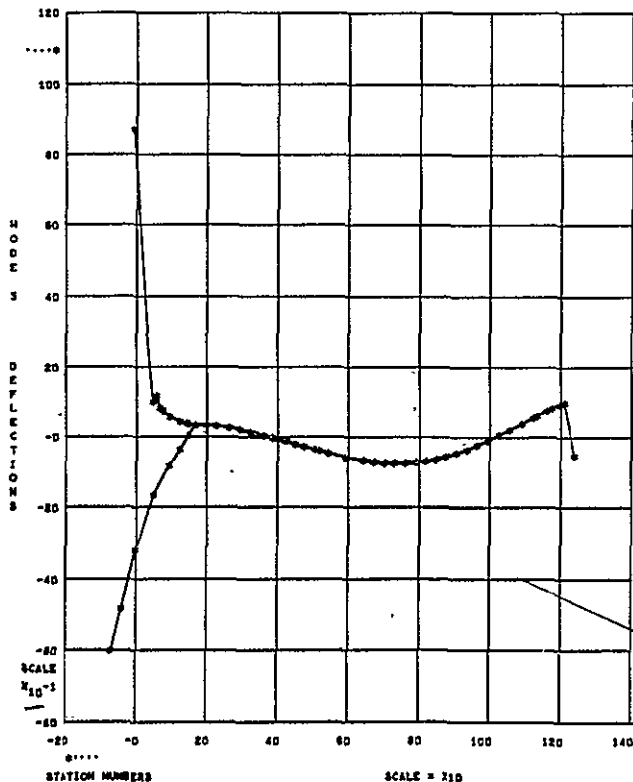
* * *

ENGINE SLOPE-COUPLING TERMS -- (CEG/FT)

BOOSTER ENGINE = 3.4087E 01

SUSTAINER ENGINE = -2.5663E 02

MD*5900 *BJR *1*156FREE MODES SLV-3C AC-13



MODE 3 *BJP *T=156.

TIME (SEC) = 156

GENERALIZED MASS (SLUGS) = 6.2727E 02

FREQUENCY (RAD/SEC) = 6.4748E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.1221E-01

RATE GYRO LOCATION = -5.5735E-01

BOOSTER ENGINE GIMBAL POINT = C.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -3.2444E 00

RATE GYRO LOCATION = 1.4881E 00

BOOSTER ENGINE GIMBAL POINT = C.

SUSTAINER ENGINE GIMBAL POINT = -3.6524E 00

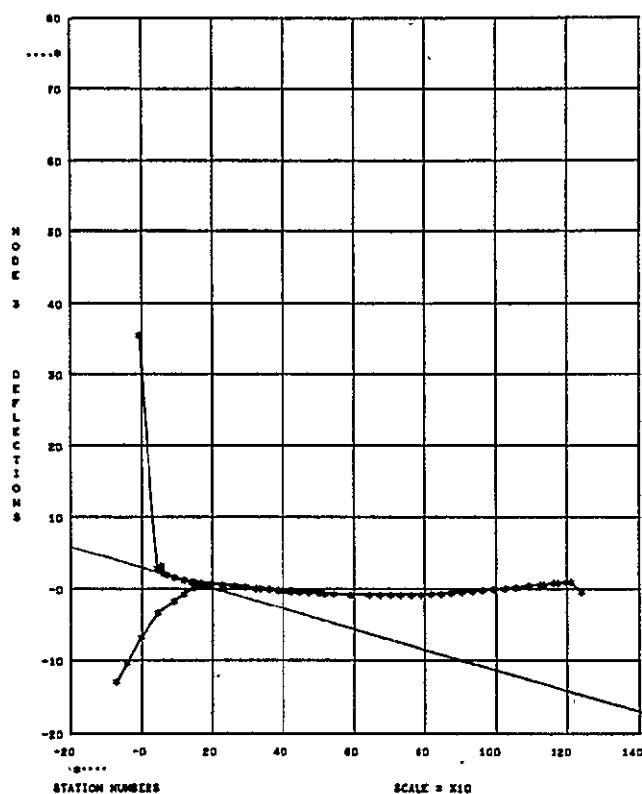
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = C.

SUSTAINER ENGINE = -3.8266E 01

MD*5900*#RJR #1*190FREE MODES SLV-3C AC-13-



MODE 3 *IPJ *T=190.

TIME (SEC) = 190

GENERALIZED MASS (SLUGS) = 4.1570E 03

FREQUENCY (RAD/SEC) = 6.6171E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.1732E 00

RATE GYRO LOCATION = -7.7232E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 8.4533E 00

RATE GYRO LOCATION = 1.2089E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -3.0627E 00

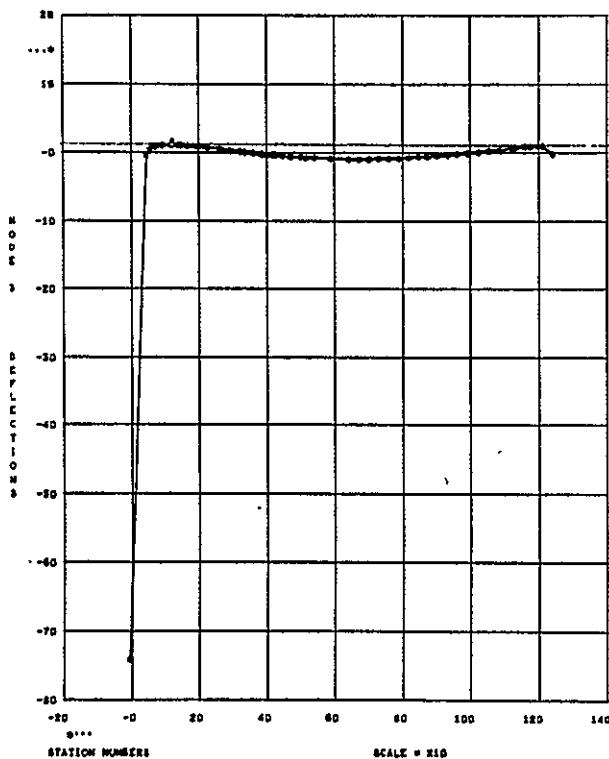
* * *

ENGINE SLOPE-COUPPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = -3.5762E 01

MD*5900*#RJR #1*221FREE MODES SLV-3C AC-13



MODE 3 *NFJ *T=221.

TIME (SEC) = 221

GENERALIZED MASS (SLUGS) = 7.2048E 03

FREQUENCY (RAD/SEC) = 6.9511E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.0845E 00

RATE GYRO LOCATION = -8.0234E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 6.0403E-01

RATE GYRO LOCATION = 1.1710E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -3.1661E 00

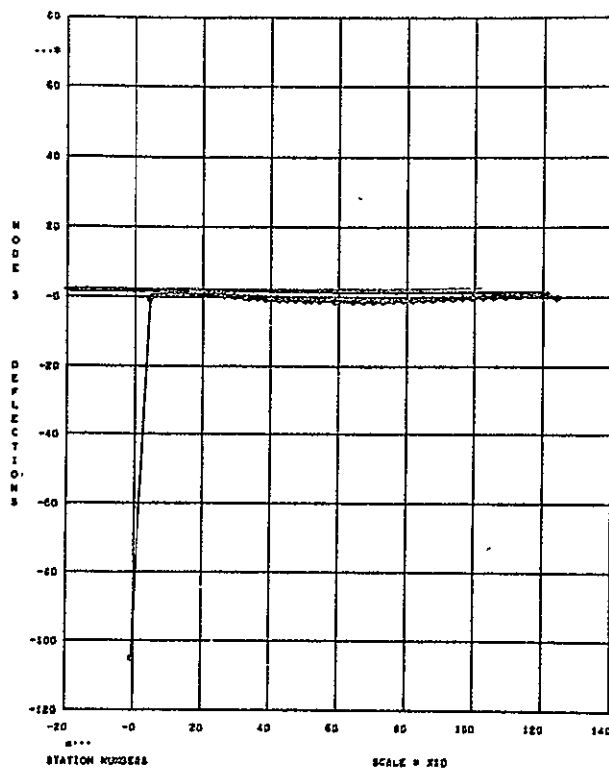
* * *

ENGINE SLOPE-COUPPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = -3.1612E 01

MD#5900 *RJR *1*249FREE MODES SLV-3C AC-13



T=249.

MODE 3 *SECO*T=249.

TIME (SEC) = 249

GENERALIZED MASS (SLUGS) = 1.4385E 04

FREQUENCY (RAD/SEC) = 6.9385E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.6024E 00

RATE GYRO LOCATION = -1.0269E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 1.6266E 00

RATE GYRO LOCATION = 1.1084E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -3.2258E 00

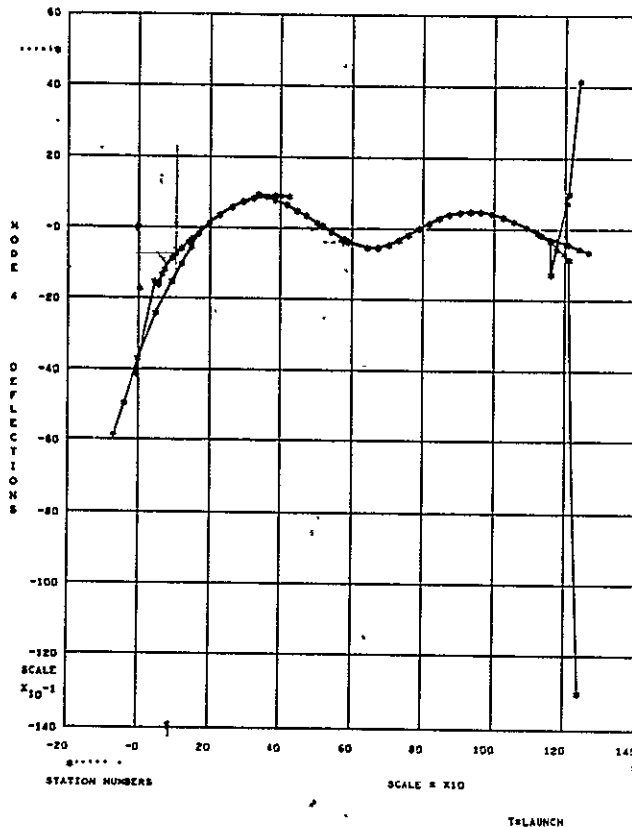
* * *

ENGINE SLOPE-COUPPING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = -3.1669E 01

MD*5900 *RJR *1*00 FREE MODES SLV-3C AC-13



MODE 4

T=LAUNCH

TIME (SEC) = 00

GENERALIZED MASS (SLUGS) = 1.5244E 04

FREQUENCY (RAD/SEC) = 4.9356E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 4.4088E-01

RATE GYRO LOCATION = -3.1670E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = -8.7278E-01

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 1.4709E 00

RATE GYRO LOCATION = 3.3477E 00

BOOSTER ENGINE GIMBAL POINT = -3.0304E 01

SUSTAINER ENGINE GIMBAL POINT = 1.0145E 01

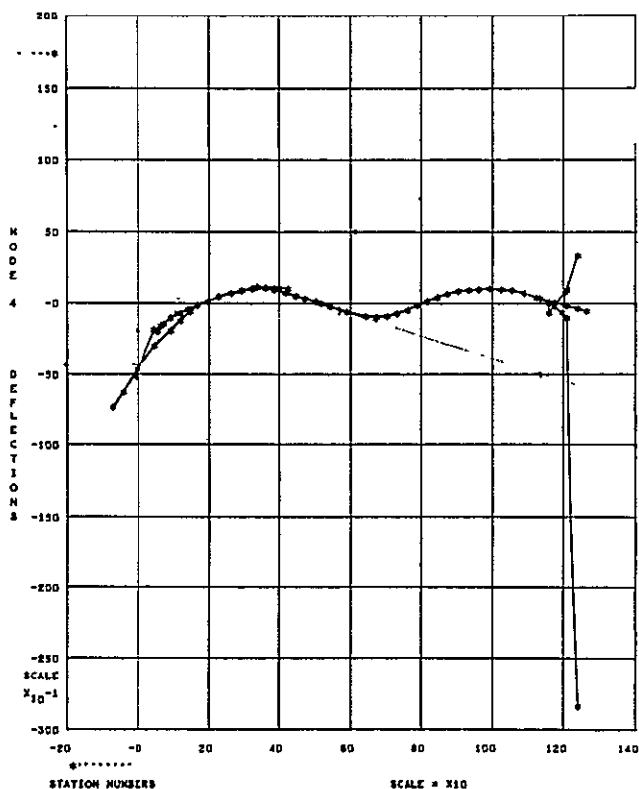
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 4.2117E 01

SUSTAINER ENGINE = -2.6895E 02

MD*5900 *RJR *1*00 FREE MODES SLV-3C AC-13



MODE 4

T=40

TIME (SEC) = 040

GENERALIZED MASS (SLUGS) = 5.5519E 04

FREQUENCY (RAD/SEC) = 4.9500E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 1.0180E 00

RATE GYRO LOCATION = -5.1610E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = -1.0248E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -1.6841E-01

RATE GYRO LOCATION = 5.1389E 00

BOOSTER ENGINE GIMBAL POINT = -2.2021E 01

SUSTAINER ENGINE GIMBAL POINT = 2.0839E 01

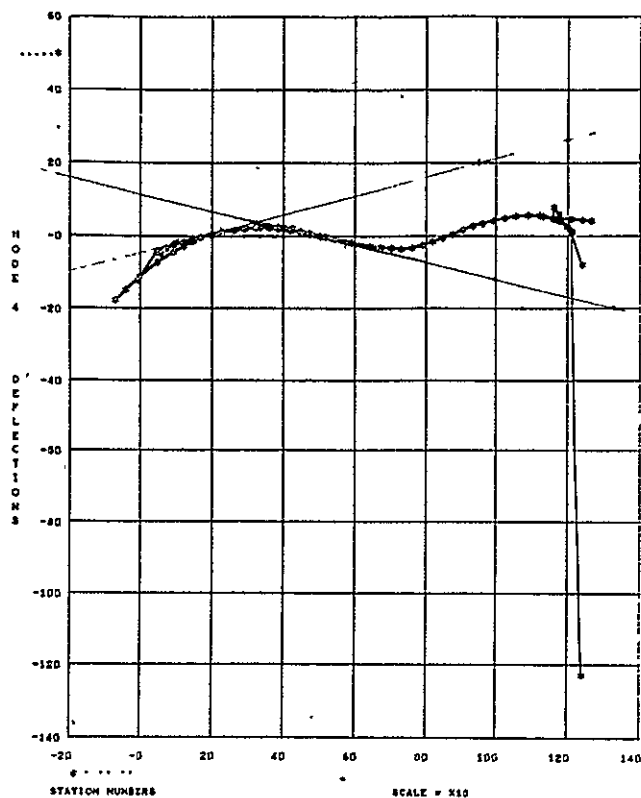
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 3.3745E 01

SUSTAINER ENGINE = -6.0273E 02

MD*5900*RJR *1*080FREE MODES SLV-3C AC-13



T= 80.

MODE 4

T= 80.

TIME (SEC) = 080

GENERALIZED MASS (SLUGS) = 1.0359E 06 ✓

FREQUENCY (RAD/SEC) = 5.0598E 01 ✓

RATE GYRO LOCATION (SN) = 563.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 4.0530E 00

RATE GYRO LOCATION = -1.6574E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 1.2768E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -1.7314E 01 ✓

RATE GYRO LOCATION = 1.3877E 01 ✓

BOOSTER ENGINE GIMBAL POINT = 9.1426E 01 ✓

SUSTAINER ENGINE GIMBAL POINT = 7.6548E 01

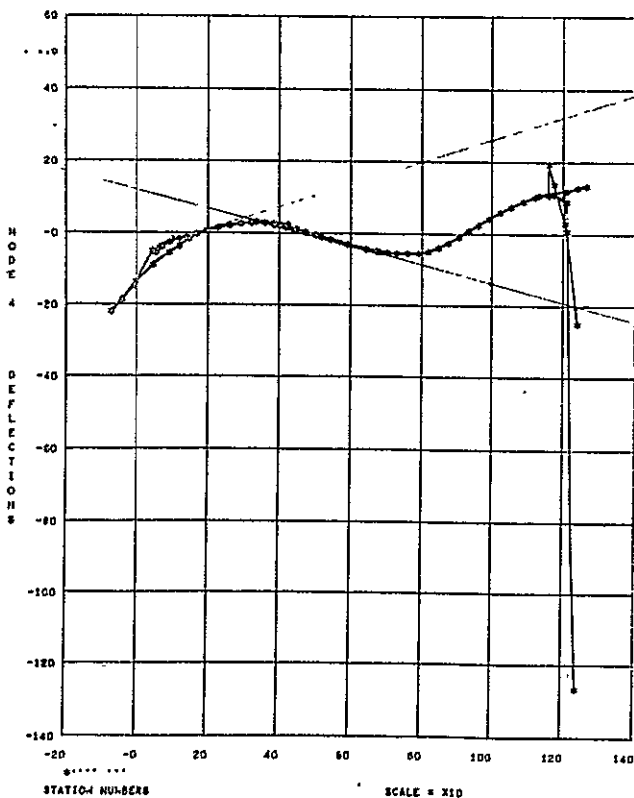
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = -1.1438E 02

SUSTAINER ENGINE = -2.7738E 03

MD*5900*RJR *1*112FREE MODES SLV-3C AC-13



T=112.

MODE 4

T=112.

TIME (SEC) = 112

GENERALIZED MASS (SLUGS) = 1.3842E 06 ✓

FREQUENCY (RAD/SEC) = 5.1525E 01 ✓

RATE GYRO LOCATION (SN) = 563.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 3.9168E 00

RATE GYRO LOCATION = -2.6456E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 8.9584E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.8760E 01 ✓

RATE GYRO LOCATION = 1.8701E 01 ✓

BOOSTER ENGINE GIMBAL POINT = 2.4560E 02 ✓

SUSTAINER ENGINE GIMBAL POINT = 5.8396E 01

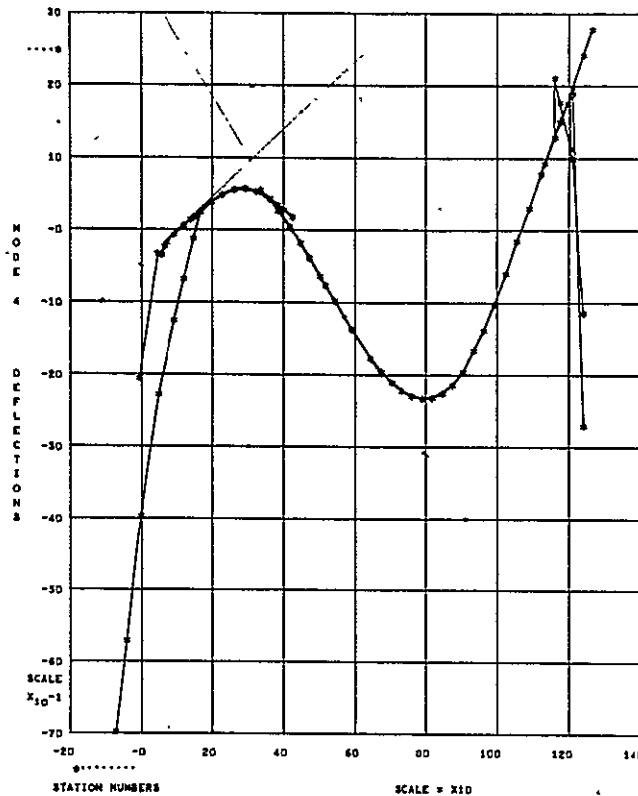
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = -3.4774E 02

SUSTAINER ENGINE = -3.0600E 03

MD*5900 *RJR *1*153FREE MODES SLV-3C AC-13



T=153.

MODE 4 *BECO*T=153.

TIME (SEC) = 153

GENERALIZED MASS (SLUGS) = 4.8485E 03 ✓

FREQUENCY (RAD/SEC) = 5.9201E 01 ✓

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.0398E 00

RATE GYRO LOCATION = -1.3048E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 1.8278E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -8.5601E 00

RATE GYRO LOCATION = 5.6256E 00

BOOSTER ENGINE GIMBAL POINT = 1.4882E 01 ✓

SUSTAINER ENGINE GIMBAL POINT = -7.1482E 00

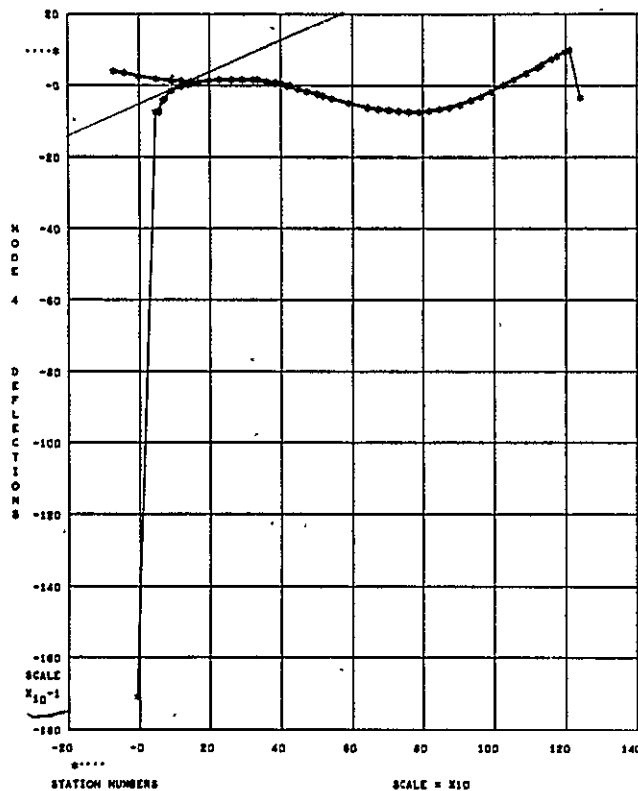
* * *

ENGINE SLOPE-COUPLED TERMS -- (DEG/FT)

BOOSTER ENGINE = -3.4402E 01

SUSTAINER ENGINE = -1.1267E 02

MD*5900 *RJR *1*156FREE MODES SLV-3C AC-13



T=156.

MODE 4 *BPJ *T=156.

TIME (SEC) = 156

GENERALIZED MASS (SLUGS) = 6.2659E 02

FREQUENCY (RAD/SEC) = 6.7739E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.6949E-01

RATE GYRO LOCATION = -4.6324E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -3.3214E 00

RATE GYRO LOCATION = 1.7477E 00

BOOSTER ENGINE GIMBAL POINT = 0.

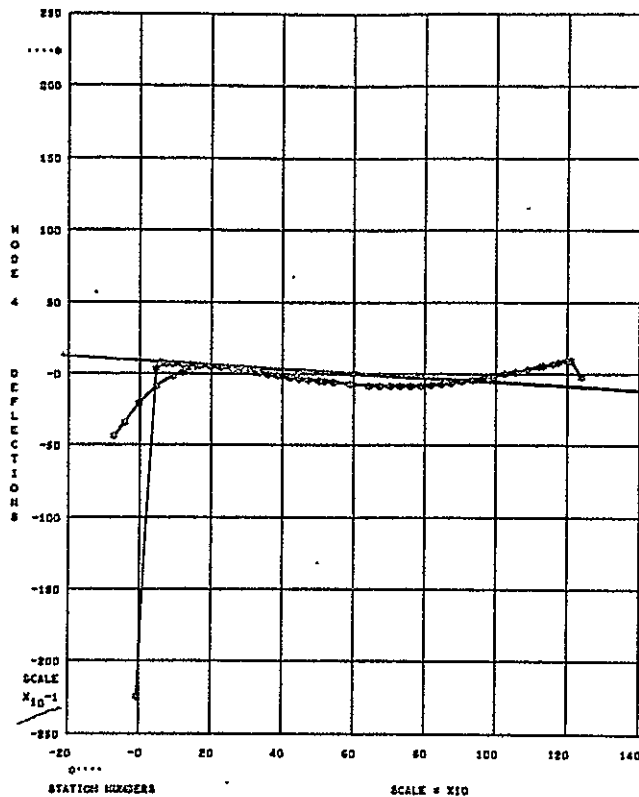
SUSTAINER ENGINE GIMBAL POINT = -3.3683E 00

* * *

ENGINE SLOPE-COUPLED TERMS -- (DEG/FT)

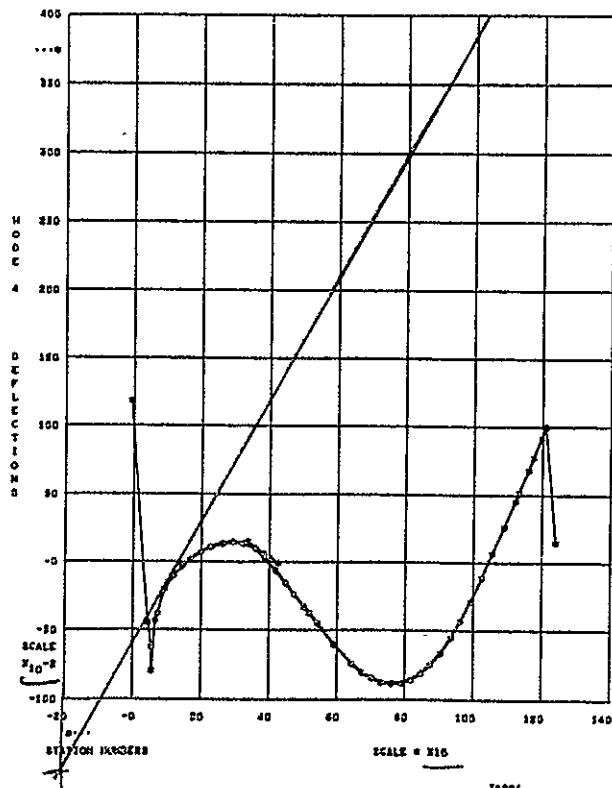
BOOSTER ENGINE = 0.

SUSTAINER ENGINE = -3.4197E 01

MD*5900*KJR *1*19C FREE MODES SLV-3C AC-13

MODE 4 *IPJ *T=190.
 TIME (SEC) = 19C
 GENERALIZED MASS (SLUGS) = 1.1060E 03
 FREQUENCY (RAD/SEC) = 7.0508E 01
 RATE GYRO LOCATION (SN) = 563.7
 DISPLACEMENT GYRO LOCATION (SN) = 122.0
 * * *
 NORMALIZED DEFLECTIONS AT -- (FT/FT)
 DISPLACEMENT GYRO LOCATION = 6.7368E-01
 RATE GYRO LOCATION = -7.1002E-01
 BOOSTER ENGINE GIMBAL POINT = C.
 SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00
 * * *
 NORMALIZED SLOPES AT -- (DEG/FT)
 DISPLACEMENT GYRO LOCATION = 1.6118E 00
 RATE GYRO LOCATION = 1.5383E 00
 BOOSTER ENGINE GIMBAL POINT = 0.
 SUSTAINER ENGINE GIMBAL POINT = -3.4961E 00
 * * *
 ENGINE SLOPE-COUPPING TERMS -- (DEG/FT)
 BOOSTER ENGINE = C.
 SUSTAINER ENGINE = -5.1293E 01

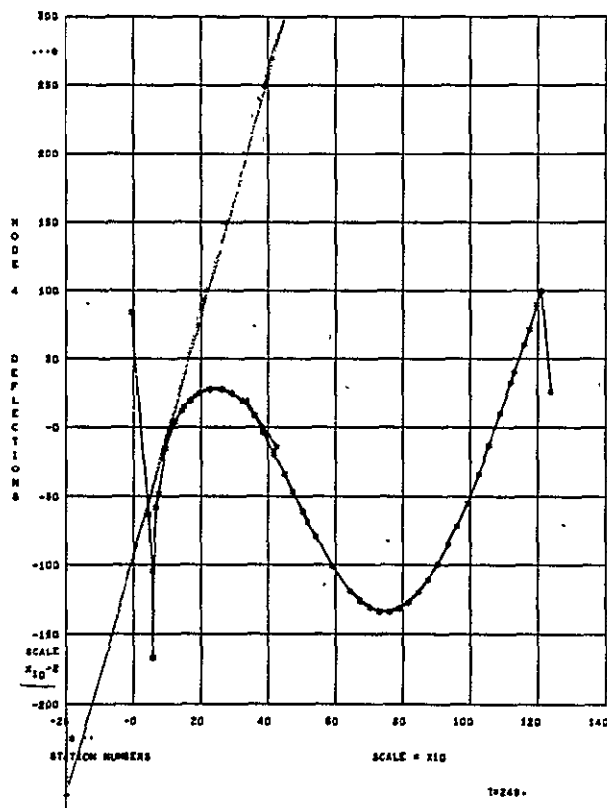
T=190.

MD*5900*RJR *1*221 FREE MODES SLV-3C AC-13

MODE 4 *NFJ *T=221.
 TIME (SEC) = 221
 GENERALIZED MASS (SLUGS) = 1.6207E 02
 FREQUENCY (RAD/SEC) = 6.7076E 01
 RATE GYRO LOCATION (SN) = 563.7
 DISPLACEMENT GYRO LOCATION (SN) = 122.0
 * * *
 NORMALIZED DEFLECTIONS AT -- (FT/FT)
 DISPLACEMENT GYRO LOCATION = -5.7748E-02
 RATE GYRO LOCATION = -5.7963E-01
 BOOSTER ENGINE GIMBAL POINT = 0.
 SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00
 * * *
 NORMALIZED SLOPES AT -- (DEG/FT)
 DISPLACEMENT GYRO LOCATION = -2.4267E 00
 RATE GYRO LOCATION = 2.0961E 00
 BOOSTER ENGINE GIMBAL POINT = 0.
 SUSTAINER ENGINE GIMBAL POINT = -4.3980E 00
 * * *
 ENGINE SLOPE-COUPPING TERMS -- (DEG/FT)
 BOOSTER ENGINE = 0.
 SUSTAINER ENGINE = -2.4005E 01

T=221.

MO*5900*BJR *1*249FREE NCDES SLV-3C AC=13



MODE 4

*SECO*T=249.

TIME (SEC) = 249

GENERALIZED MASS (SLUGS) = 1.5417E 02

FREQUENCY (RAD/SEC) = 1.0363E 02

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = 3.9176E-02

RATE GYRO LOCATION = -9.7270E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -3.9509E 00

RATE GYRO LOCATION = 2.7814E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -5.6800E 00

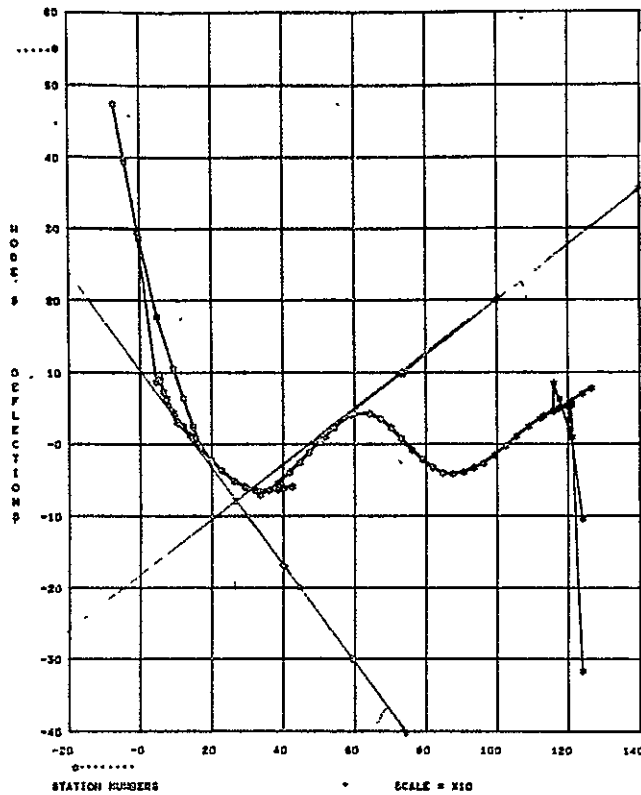
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = -2.2485E 01

MD*5900*BJR *1*00 FREE MODES SLV-3C AC-13



MODE 5

T=LAUNCH

TIME (SEC) = 00

GENERALIZED MASS (SLUGS) = 2.6285E 05 ✓

FREQUENCY (RAD/SEC) = 5.3105E 01 ✓

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.6710E 00

RATE GYRO LOCATION = 3.8868E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 5.3804E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -2.5264E 01 ✓

RATE GYRO LOCATION = -1.7353E 01 ✓

BOOSTER ENGINE GIMBAL POINT = 1.0132E 02 ✓

SUSTAINER ENGINE GIMBAL POINT = -2.7081E-01

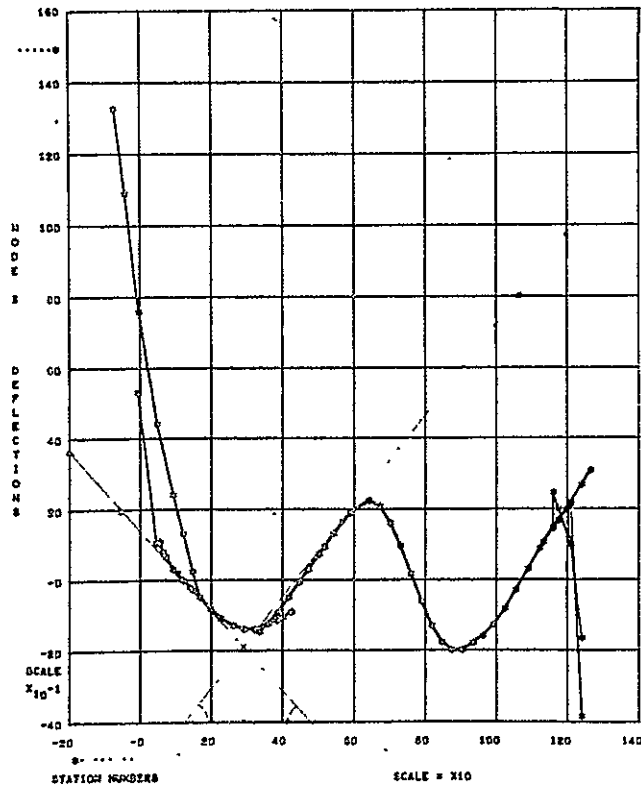
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = -1.6230E 02

SUSTAINER ENGINE = -8.5154E 02

MD*5900*BJR *1*040 FREE MODES SLV-3C AC-13



MODE 5

T= 40.

TIME (SEC) = 040

GENERALIZED MASS (SLUGS) = 1.9675E 04 ✓

FREQUENCY (RAD/SEC) = 5.7820E 01 ✓

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.2688E 00

RATE GYRO LOCATION = 1.8038E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 2.1277E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -8.2572E 00 ✓

RATE GYRO LOCATION = -7.3376E 00 ✓

BOOSTER ENGINE GIMBAL POINT = 1.5422E 01 ✓

SUSTAINER ENGINE GIMBAL POINT = -7.2864E 00

* * *

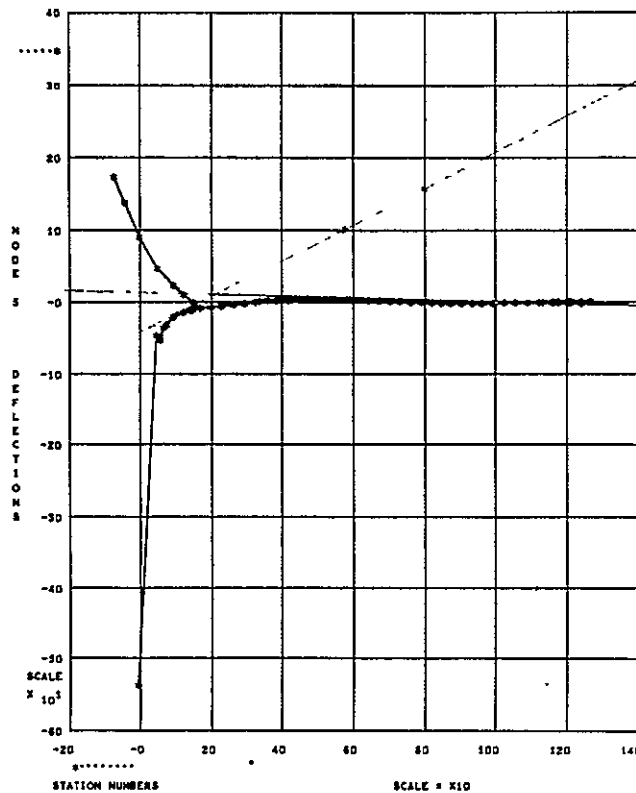
ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = -4.1427E 01

SUSTAINER ENGINE = -1.4456E 02

MD*5900:44JR *1*80FREE MODES SLV-3C AC-13

T= 80.



T= 80.

MODE 5

TIME (SEC) = 080

GENERALIZED MASS (SLUGS) = 8.1945E 05 ✓

FREQUENCY (RAD/SEC) = 6.5929E 01 ✓

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.3418E 00

RATE GYRO LOCATION = 4.1554E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 1.5522E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -6.4728E 00 ✓

RATE GYRO LOCATION = 6.8100E 00 ✓

BOOSTER ENGINE GIMBAL POINT = 5.9518E 00 ✓

SUSTAINER ENGINE GIMBAL POINT = -7.9006E 00

* * *

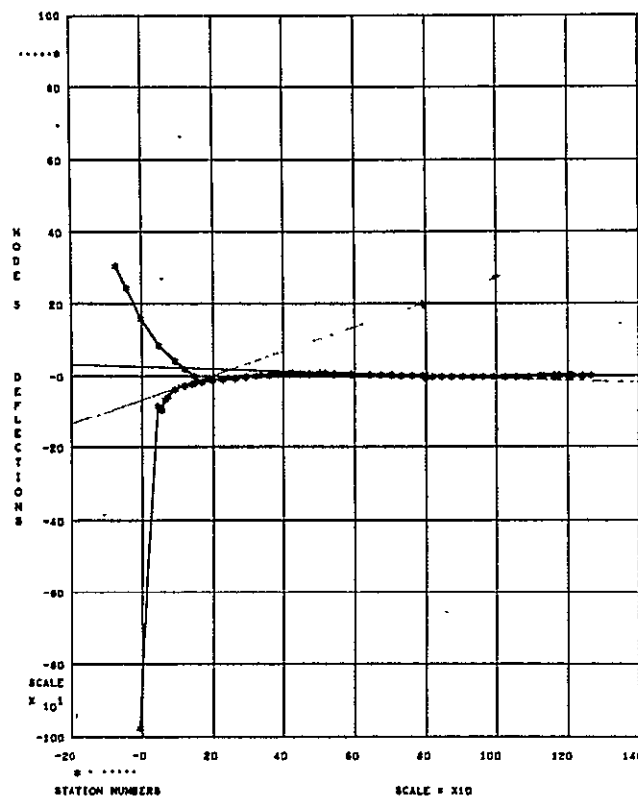
ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = -2.2594E 01

SUSTAINER ENGINE = -6.4041E 01

MD*5900:44JR *1*112FREE MODES SLV-3C AC-13

T=112.



T=112.

MODE 5

TIME (SEC) = 112

GENERALIZED MASS (SLUGS) = 2.6107E 06 ✓

FREQUENCY (RAD/SEC) = 6.5967E 01 ✓

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.2797E 00

RATE GYRO LOCATION = 6.5369E 00

BOOSTER ENGINE GIMBAL POINT = 1.0000E 00

SUSTAINER ENGINE GIMBAL POINT = 1.5376E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -6.3837E 00

RATE GYRO LOCATION = 1.4752E 01

BOOSTER ENGINE GIMBAL POINT = 5.9079E 00

SUSTAINER ENGINE GIMBAL POINT = -7.5829E 00

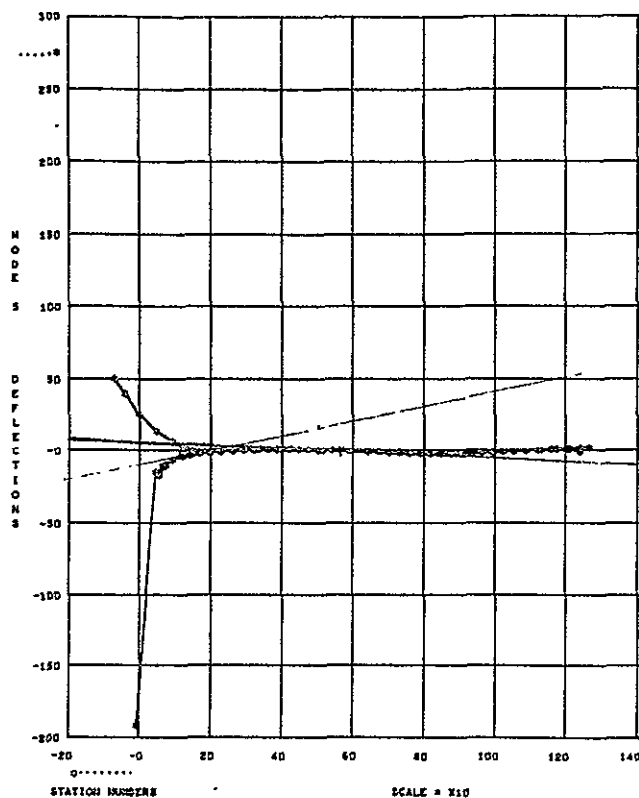
* * *

ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = -2.2098E 01

SUSTAINER ENGINE = -6.2712E 01

MD*5900*BJR *1*153FREE MODES SLV-3C AC-13



MODE 5 *BECO*T=153.

TIME (SEC) = 153

GENERALIZED MASS (SLUGS) = 8.8281E 04 ✓

FREQUENCY (RAD/SEC) = 6.6211E 01 ✓

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.4726E 00

RATE GYRO LOCATION = -1.4696E-01

BOOSTER ENGINE GIMBAL POINT = 1.0000E 01

SUSTAINER ENGINE GIMBAL POINT = 1.5427E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -7.5152E 00

RATE GYRO LOCATION = 7.2952E 00 ✓

BOOSTER ENGINE GIMBAL POINT = 5.7754E 00 ✓

SUSTAINER ENGINE GIMBAL POINT = -8.6511E 00

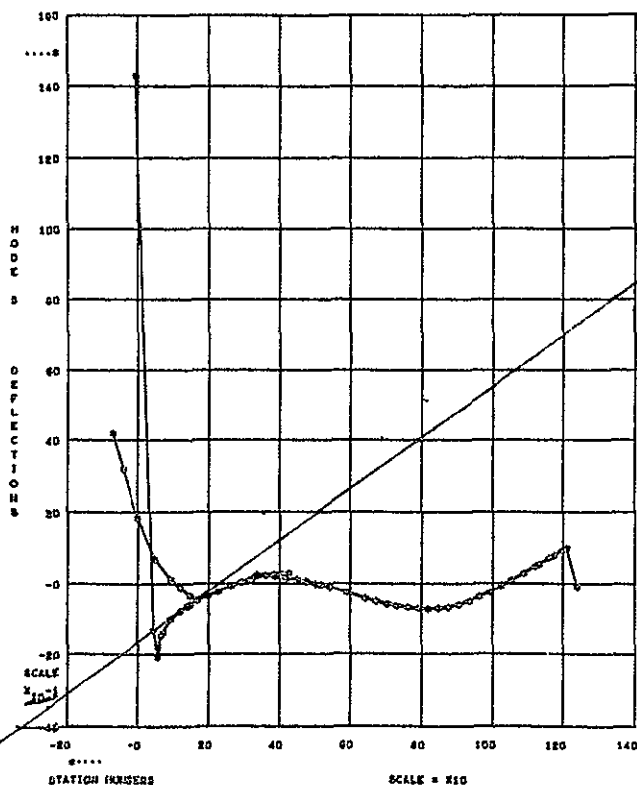
* * *

ENGINE SLOPE-COUPPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = -2.3440E 01

SUSTAINER ENGINE = -6.4823E 01

MD*5900*BJR *1*156FREE MODES SLV-3C AC-13



MODE 5 *BPJ *T=156.

TIME (SEC) = 156

GENERALIZED MASS (SLUGS) = 9.0208E 02

FREQUENCY (RAD/SEC) = 7.3951E 01

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 991.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -2.5932E-01

RATE GYRO LOCATION = -2.4773E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = -3.4167E 00

RATE GYRO LOCATION = 2.1846E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -3.8630E 00

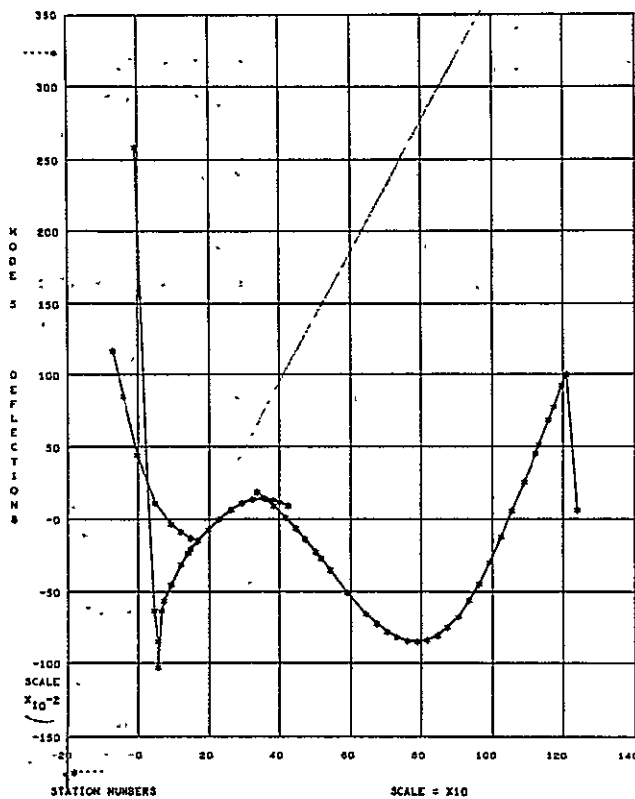
* * *

ENGINE SLOPE-COUPPLING TERMS -- (DEG/FT)

BOOSTER ENGINE = 0.

SUSTAINER ENGINE = -2.9124E 01

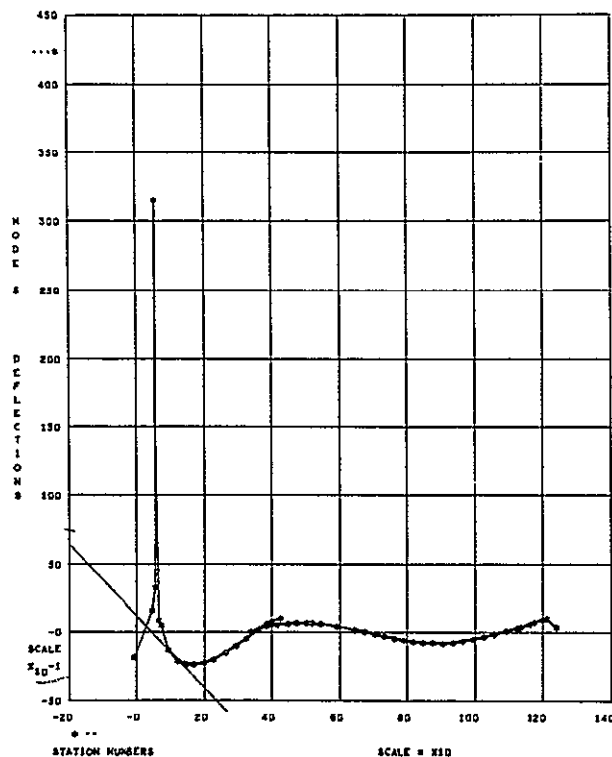
MD*5900 *RJR *T*190FREE MODES SLV-3C AC-13



T=190.

MODE 5 *1PJ *T=190.
TIME (SEC) = 190
GENERALIZED MASS (SLUGS) = 2.4438E 02
FREQUENCY (RAD/SEC) = 8.1065E 01
RATE GYRO LOCATION (SN) = 583.7
DISPLACEMENT GYRO LOCATION (SN) = 122.0
* * *
NORMALIZED DEFLECTIONS AT -- (FT/FT)
DISPLACEMENT GYRO LOCATION = -3.1500E-01
RATE GYRO LOCATION = -4.6154E-01
BOOSTER ENGINE GIMBAL POINT = 0.
SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00
* * *
NORMALIZED SLOPES AT -- (DEG/FT)
DISPLACEMENT GYRO LOCATION = -3.2858E 00
RATE GYRO LOCATION = 2.1193E 00
BOOSTER ENGINE GIMBAL POINT = 0.
SUSTAINER ENGINE GIMBAL POINT = -4.2491E 00
* * *
ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)
BOOSTER ENGINE = 0.
SUSTAINER ENGINE = -2.5876E 01

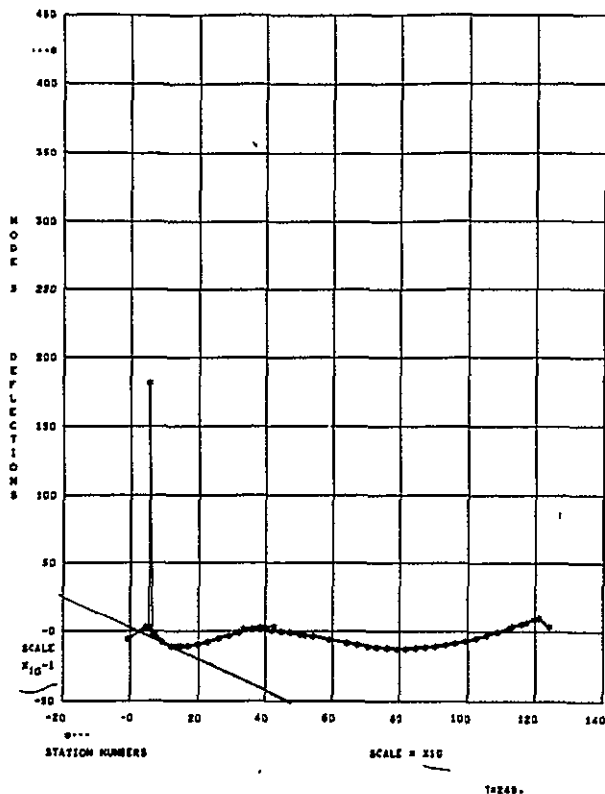
MD*5900 *RJR *T*221FREE MODES SLV-3C AC-13



T=221.

MODE 5 *NFJ *T=221.
TIME (SEC) = 221
GENERALIZED MASS (SLUGS) = 4.7163E 03
FREQUENCY (RAD/SEC) = 1.2542E 02
RATE GYRO LOCATION (SN) = 583.7
DISPLACEMENT GYRO LOCATION (SN) = 122.0
* * *
NORMALIZED DEFLECTIONS AT -- (FT/FT)
DISPLACEMENT GYRO LOCATION = -2.1282E 00
RATE GYRO LOCATION = 4.5411E-01
BOOSTER ENGINE GIMBAL POINT = 0.
SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00
* * *
NORMALIZED SLOPES AT -- (DEG/FT)
DISPLACEMENT GYRO LOCATION = 1.3967E 01
RATE GYRO LOCATION = 2.7344E 00
BOOSTER ENGINE GIMBAL POINT = 0.
SUSTAINER ENGINE GIMBAL POINT = -6.2492E 00
* * *
ENGINE SLOPE-COUPLING TERMS -- (DEG/FT)
BOOSTER ENGINE = 0.
SUSTAINER ENGINE = -2.1073E 01

MD*5900 *RJR *1*249 FREE MODES SLV-3C AC-13



MODE 5

*SECO*T=249.

TIME (SEC) = 249

GENERALIZED MASS (SLUGS) = 1.5021E 03

FREQUENCY (RAD/SEC) = 1.2739E 02

RATE GYRO LOCATION (SN) = 583.7

DISPLACEMENT GYRO LOCATION (SN) = 122.0

* * *

NORMALIZED DEFLECTIONS AT -- (FT/FT)

DISPLACEMENT GYRO LOCATION = -1.0650E 00

RATE GYRO LOCATION = -5.6296E-01

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = 1.0000E 00

* * *

NORMALIZED SLOPES AT -- (DEG/FT)

DISPLACEMENT GYRO LOCATION = 3.6296E 00

RATE GYRO LOCATION = 3.3277E 00

BOOSTER ENGINE GIMBAL POINT = 0.

SUSTAINER ENGINE GIMBAL POINT = -6.9004E 00

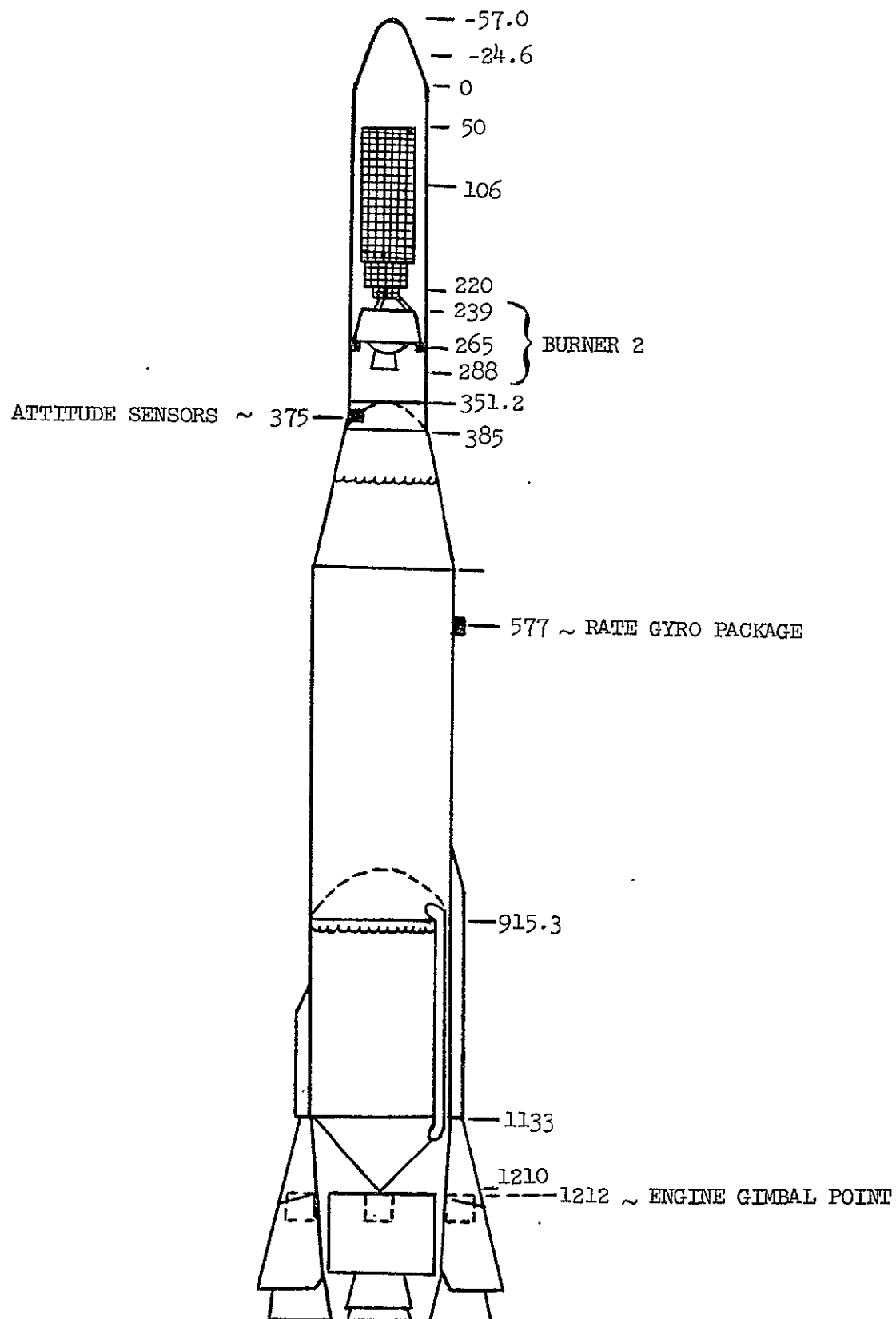
* * *

ENGINE SLOPE-COUPPING TERMS -- (DEG/FT)

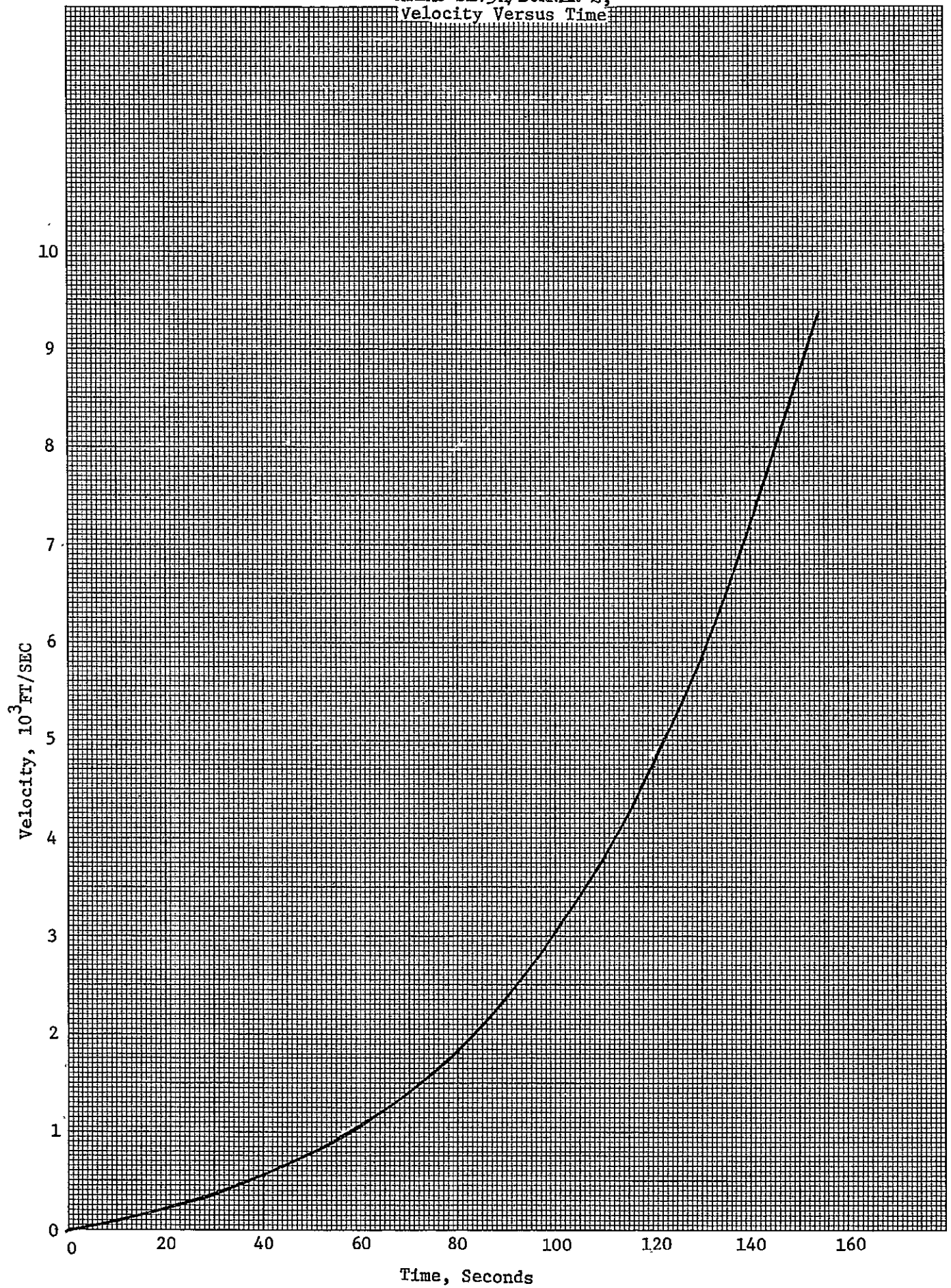
BOOSTER ENGINE = 0.

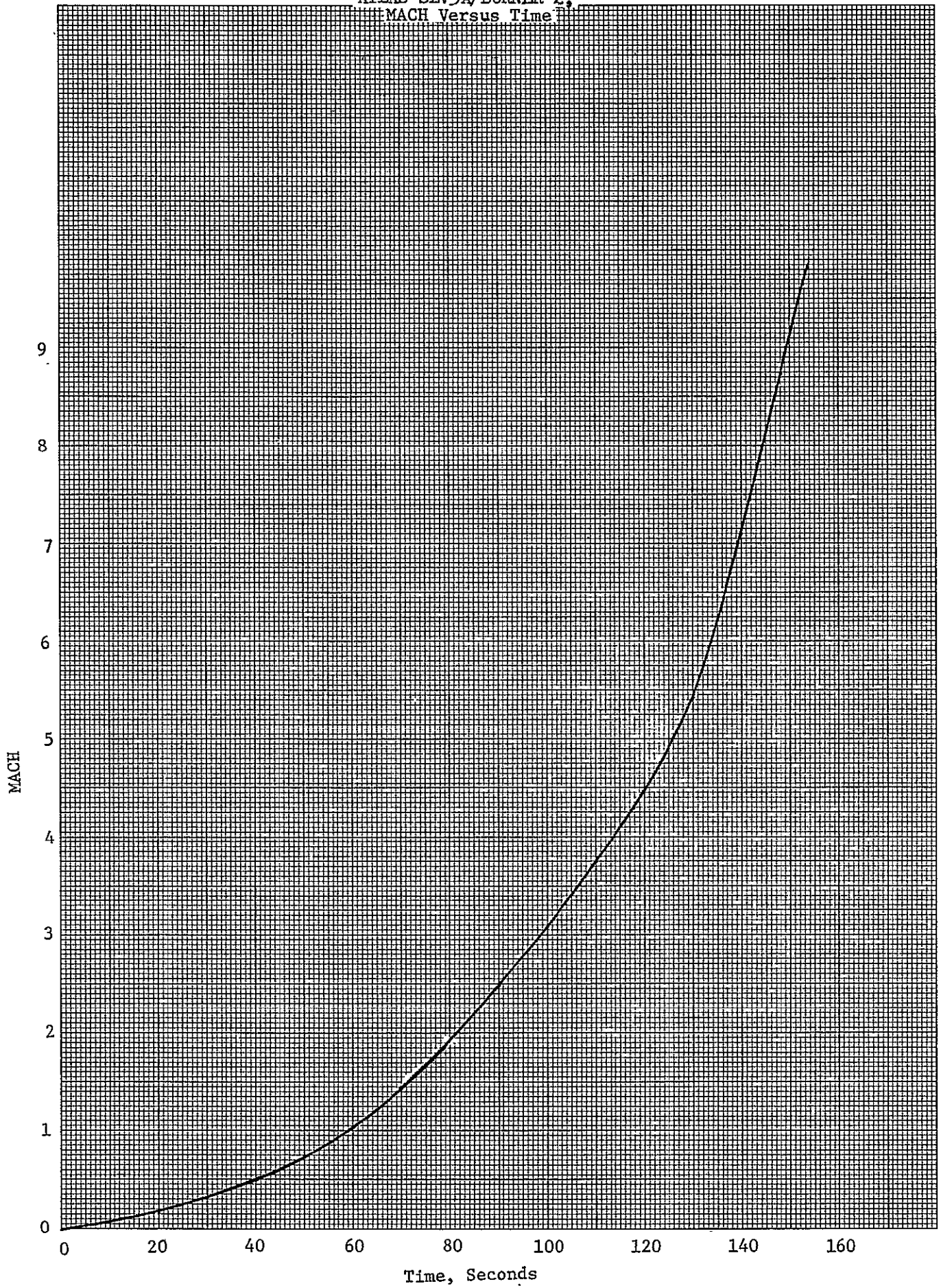
SUSTAINER ENGINE = -2.1727E 01

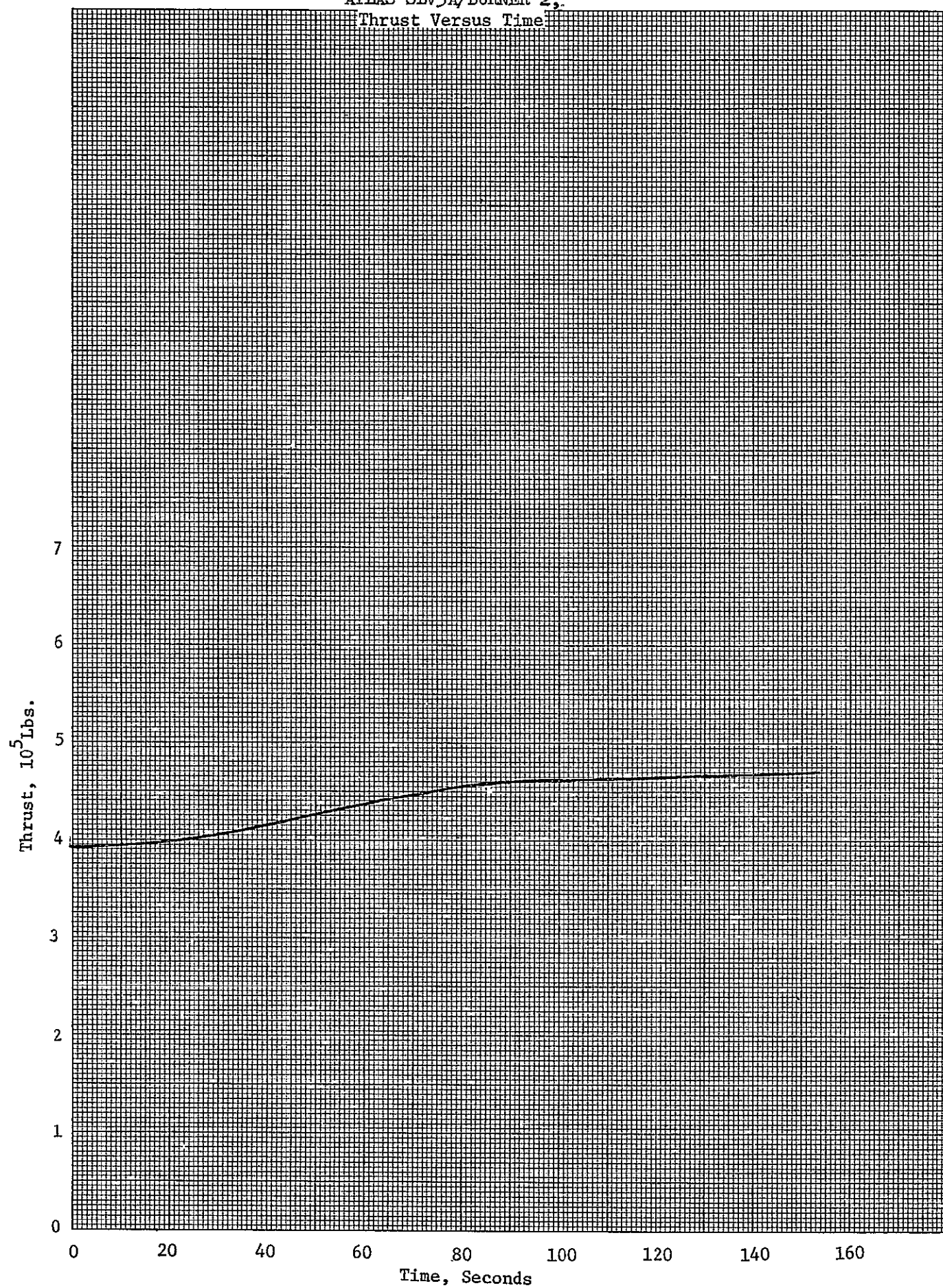
ATLAS SLV3A/BURNER 2

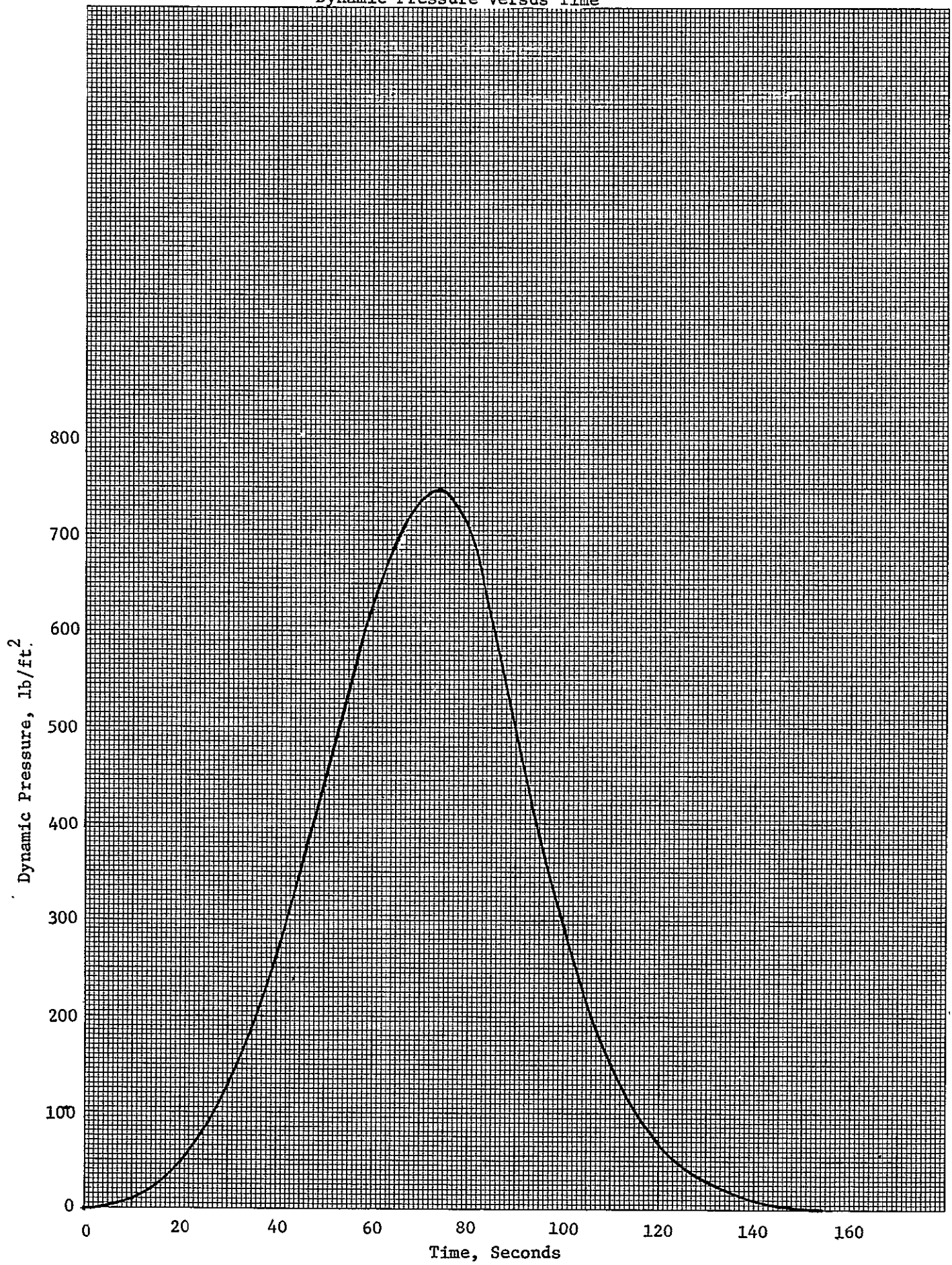


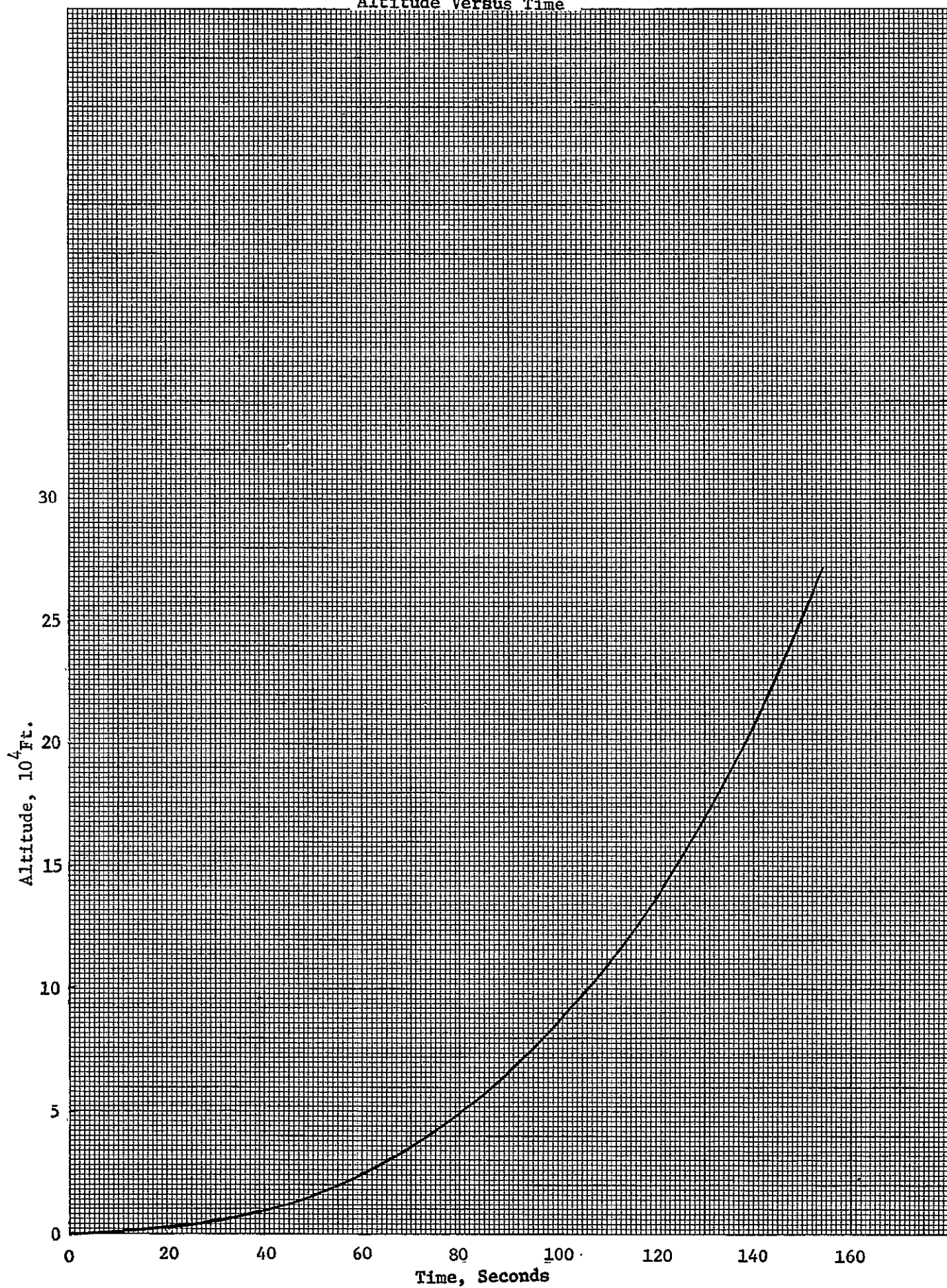
TRAJECTORY PLOTS



ATLAS SLV3A/BURNER 2,
MACH Versus Time

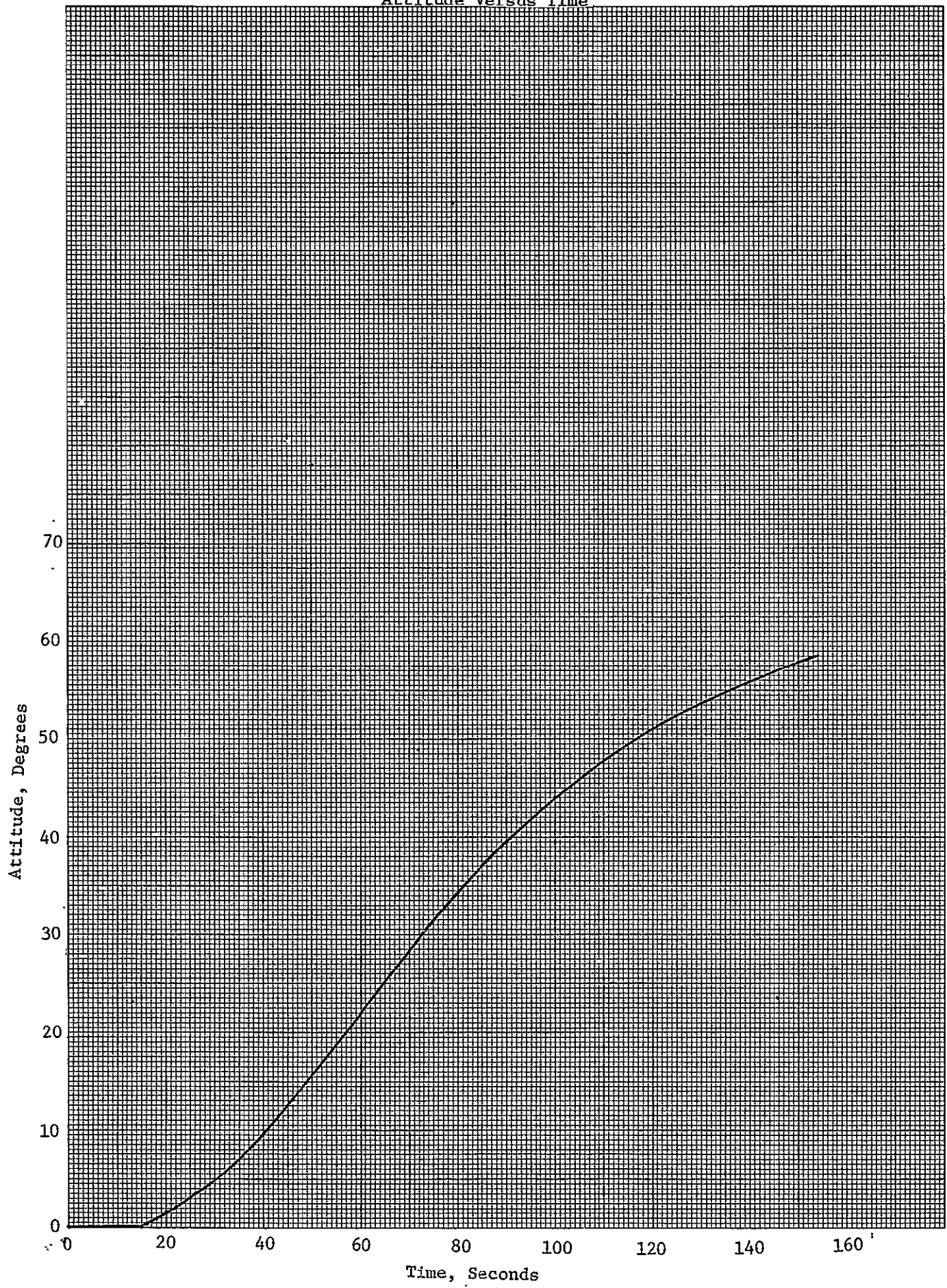


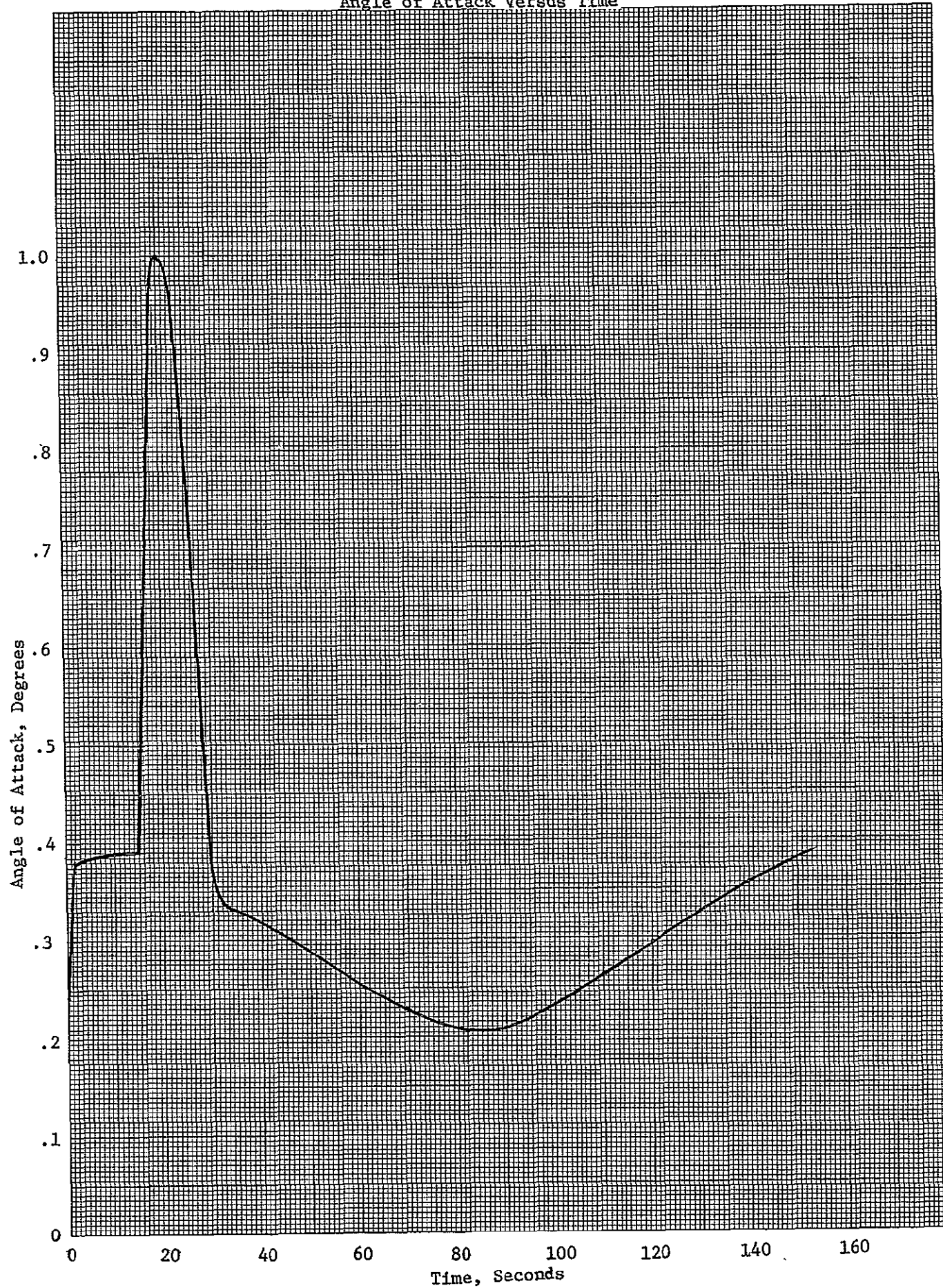




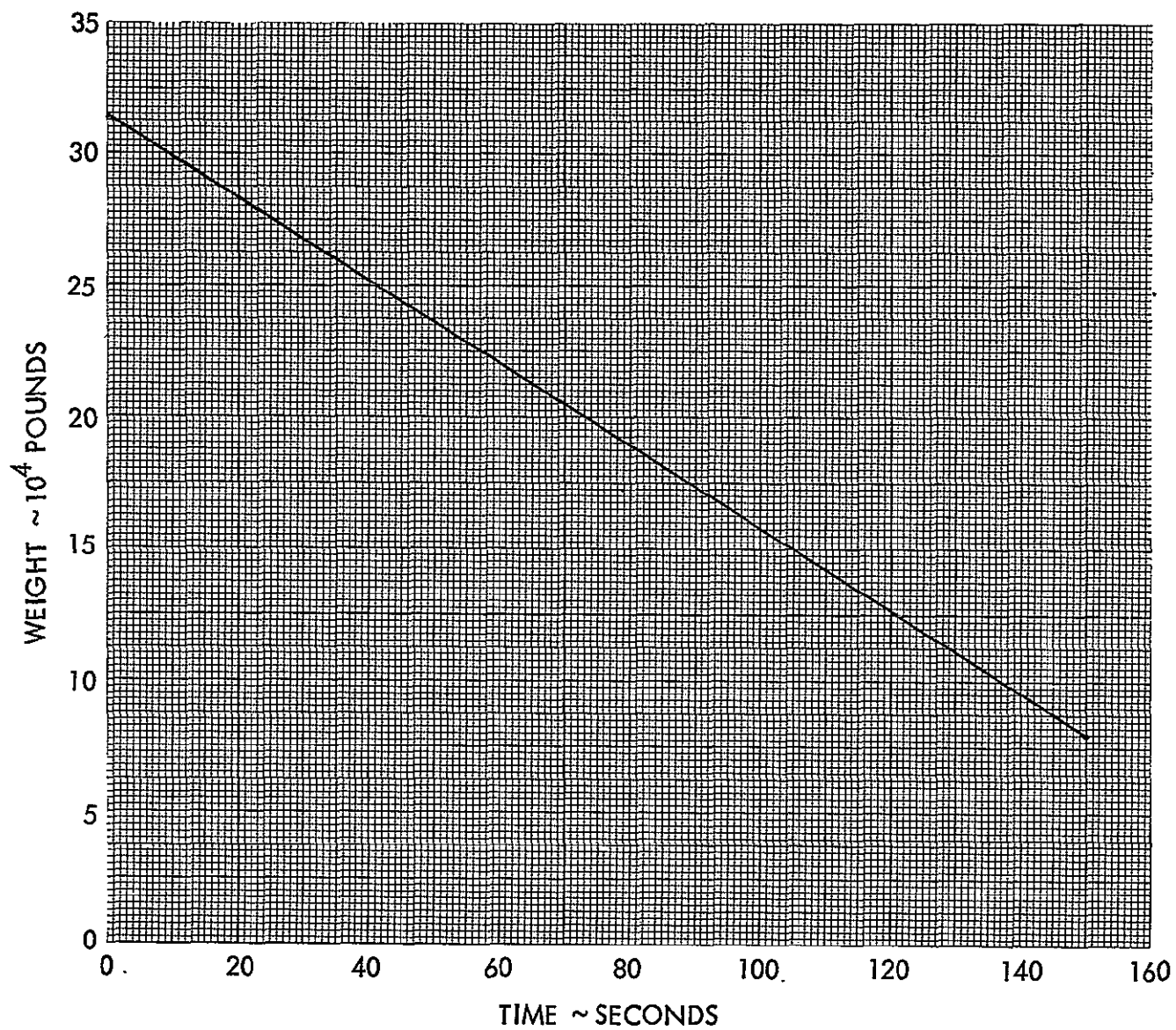
ATLAS SLV3A/BURNER 2,
Attitude Versus Time

91

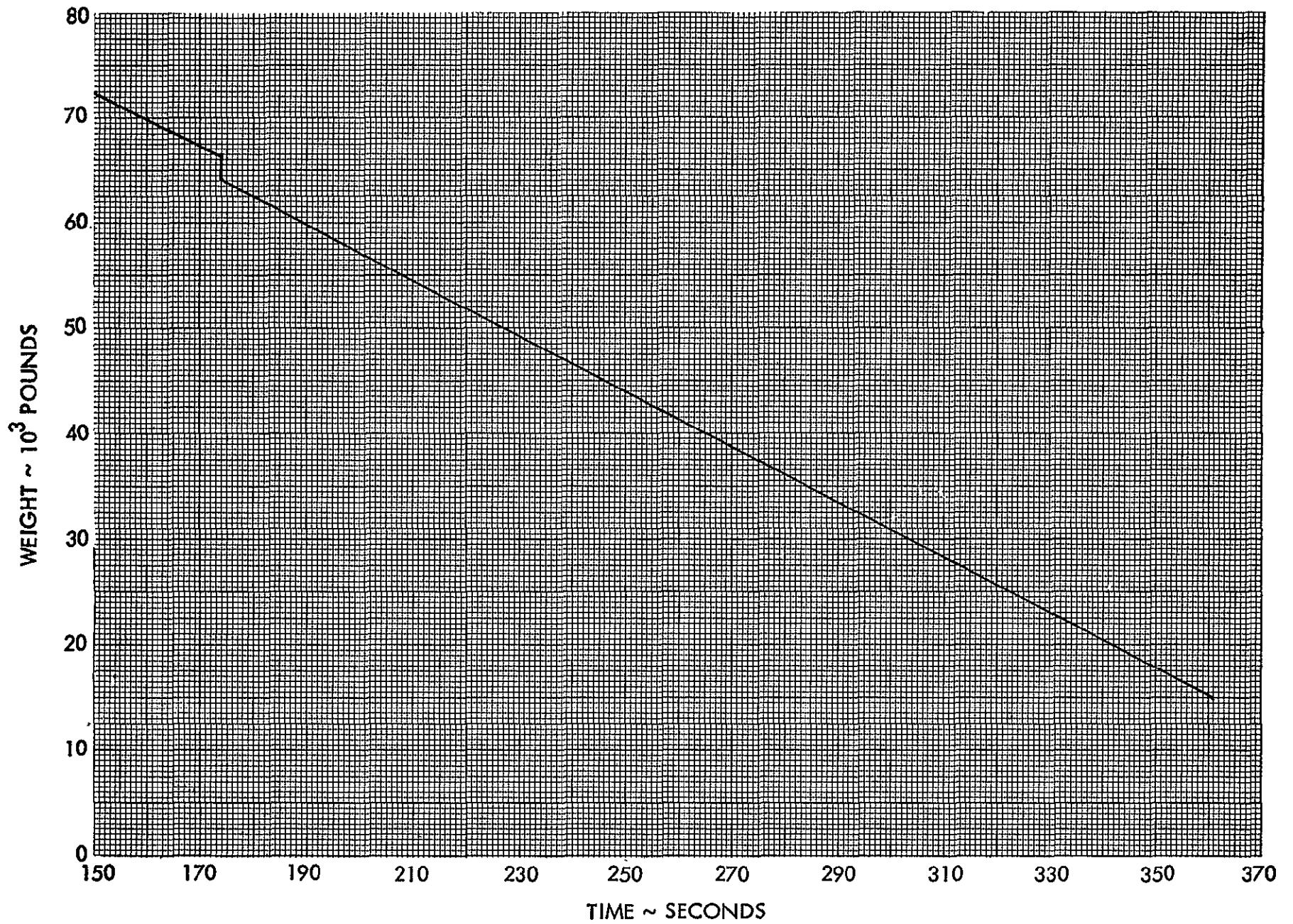




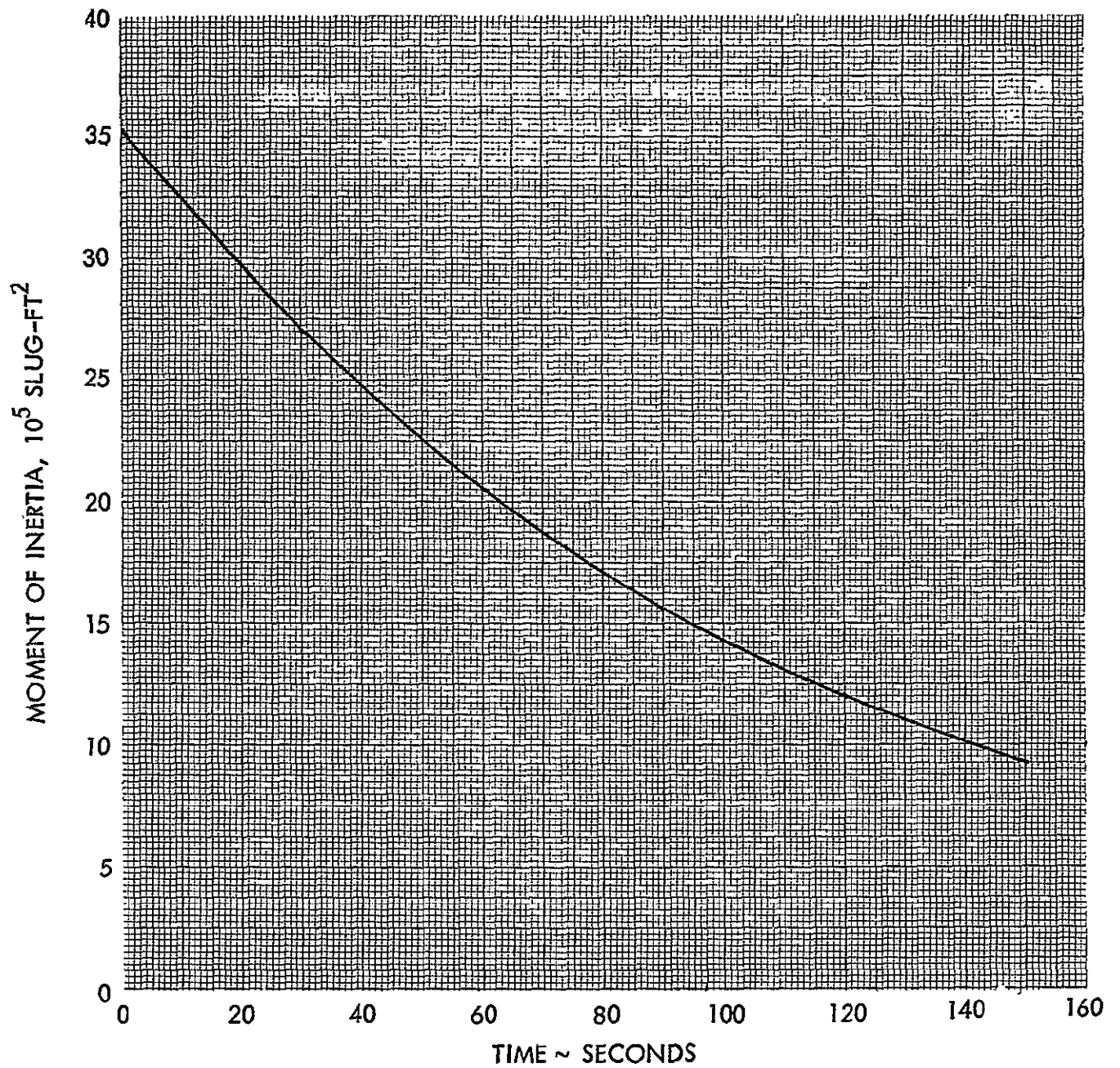
ATLAS SLV 3A/BURNER 2, WEIGHT VERSUS TIME, BOOSTER PHASE



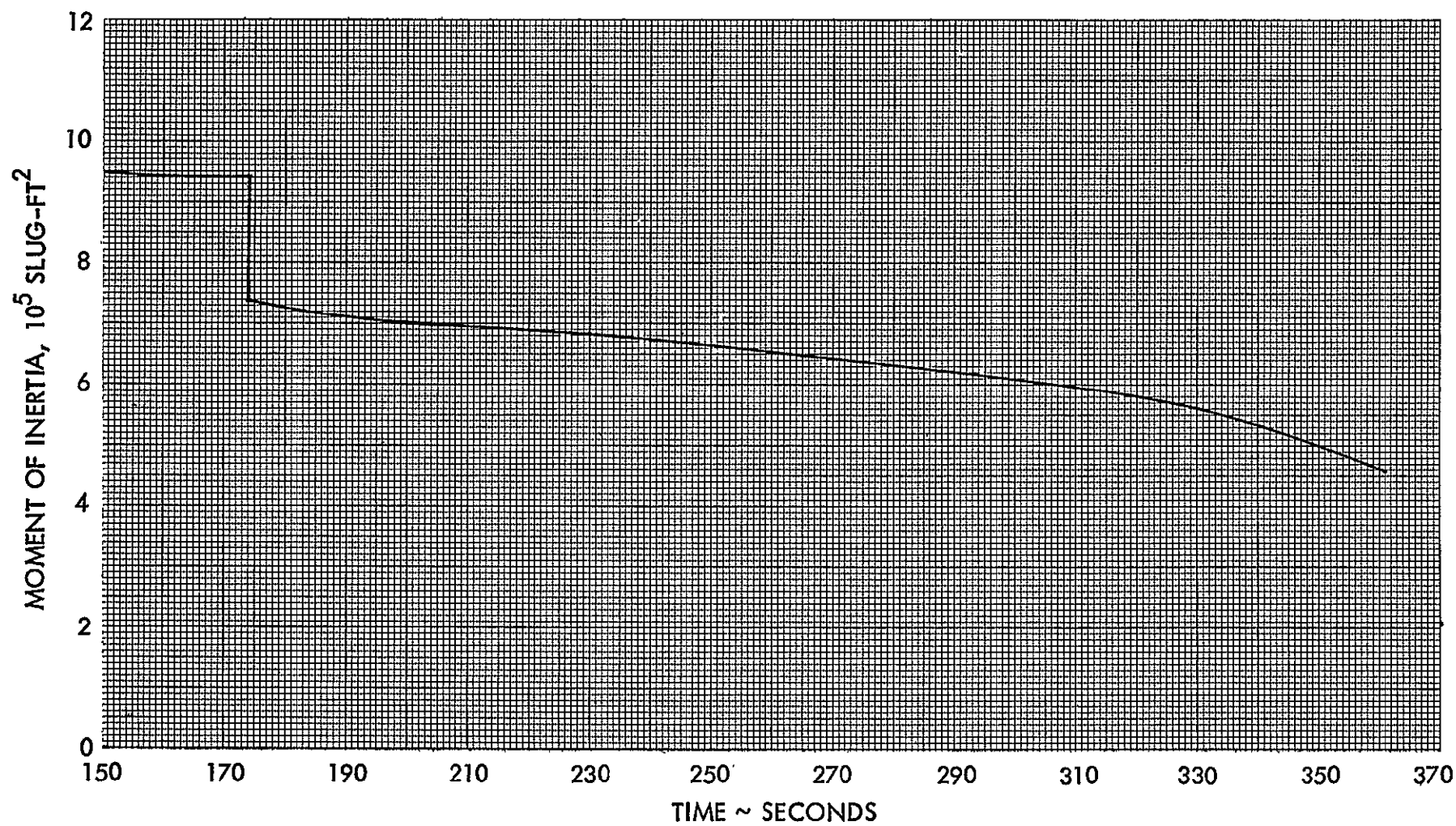
ATLAS SLV 3A/BURNER 2, WEIGHT VERSUS TIME, SUSTAINER PHASE



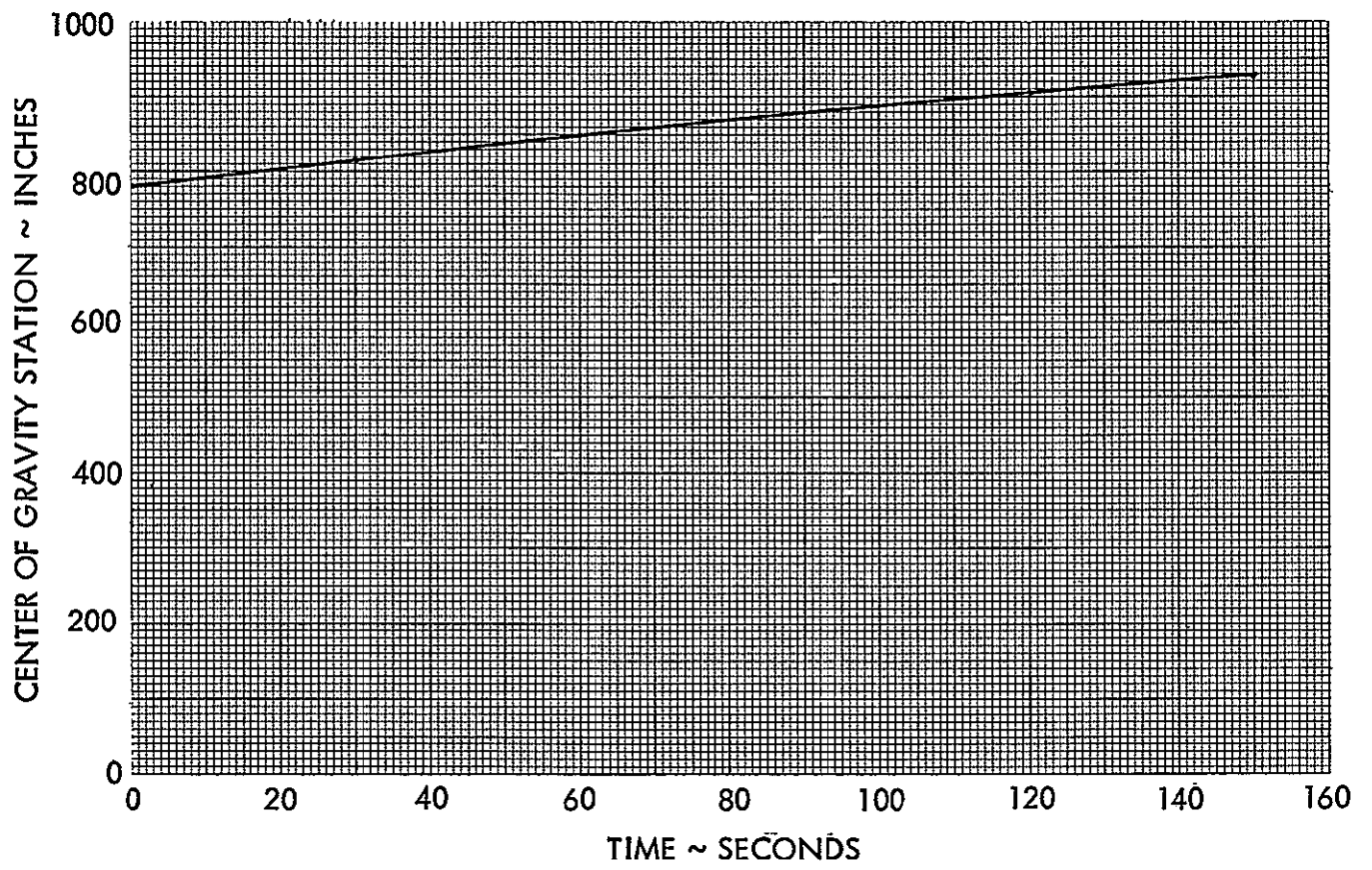
ATLAS SLV 3A/BURNER 2, MOMENT OF INERTIA VERSUS TIME, BOOSTER PHASE



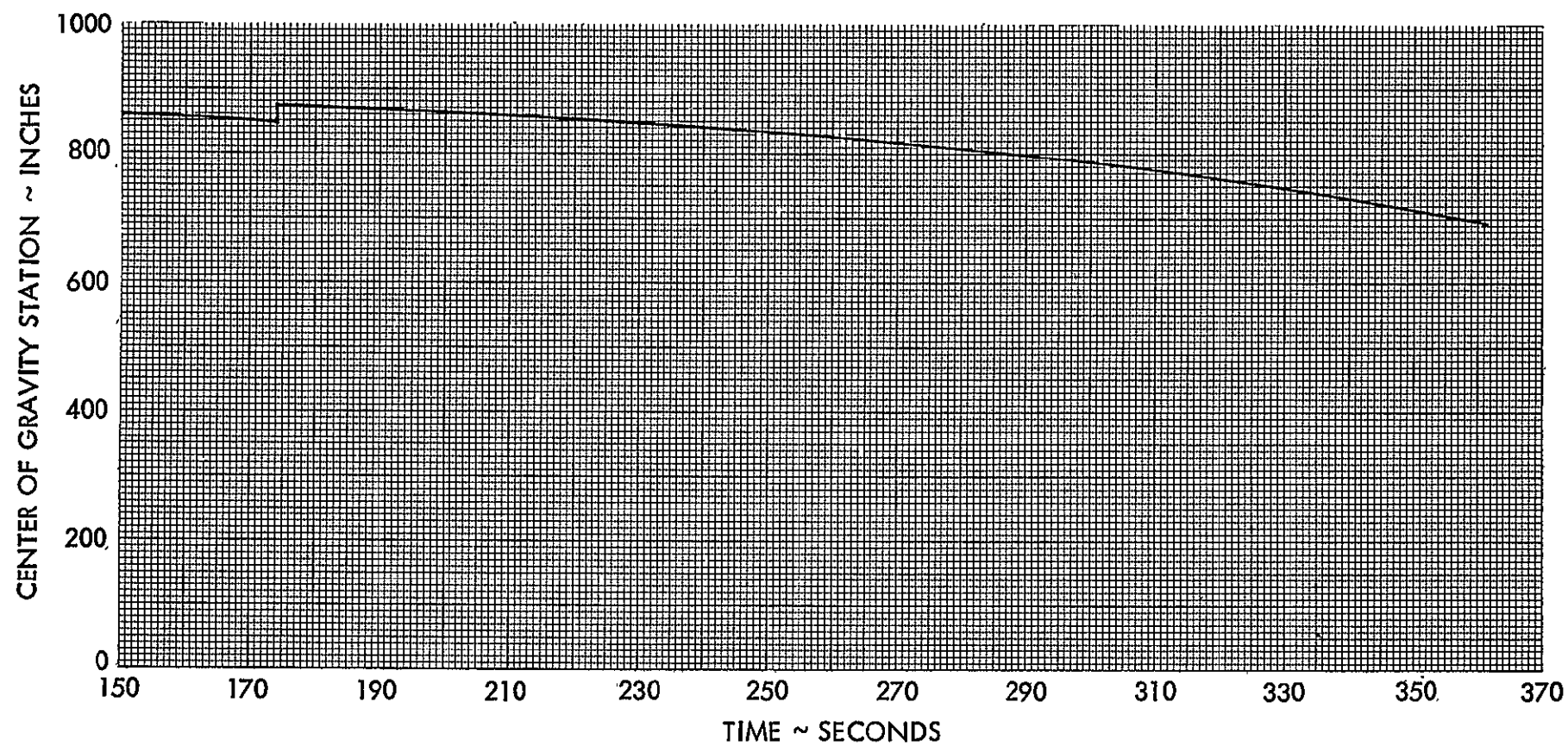
ATLAS SLV 3A/BURNER 2, MOMENT OF INERTIA VERSUS TIME, SUSTAINER PHASE



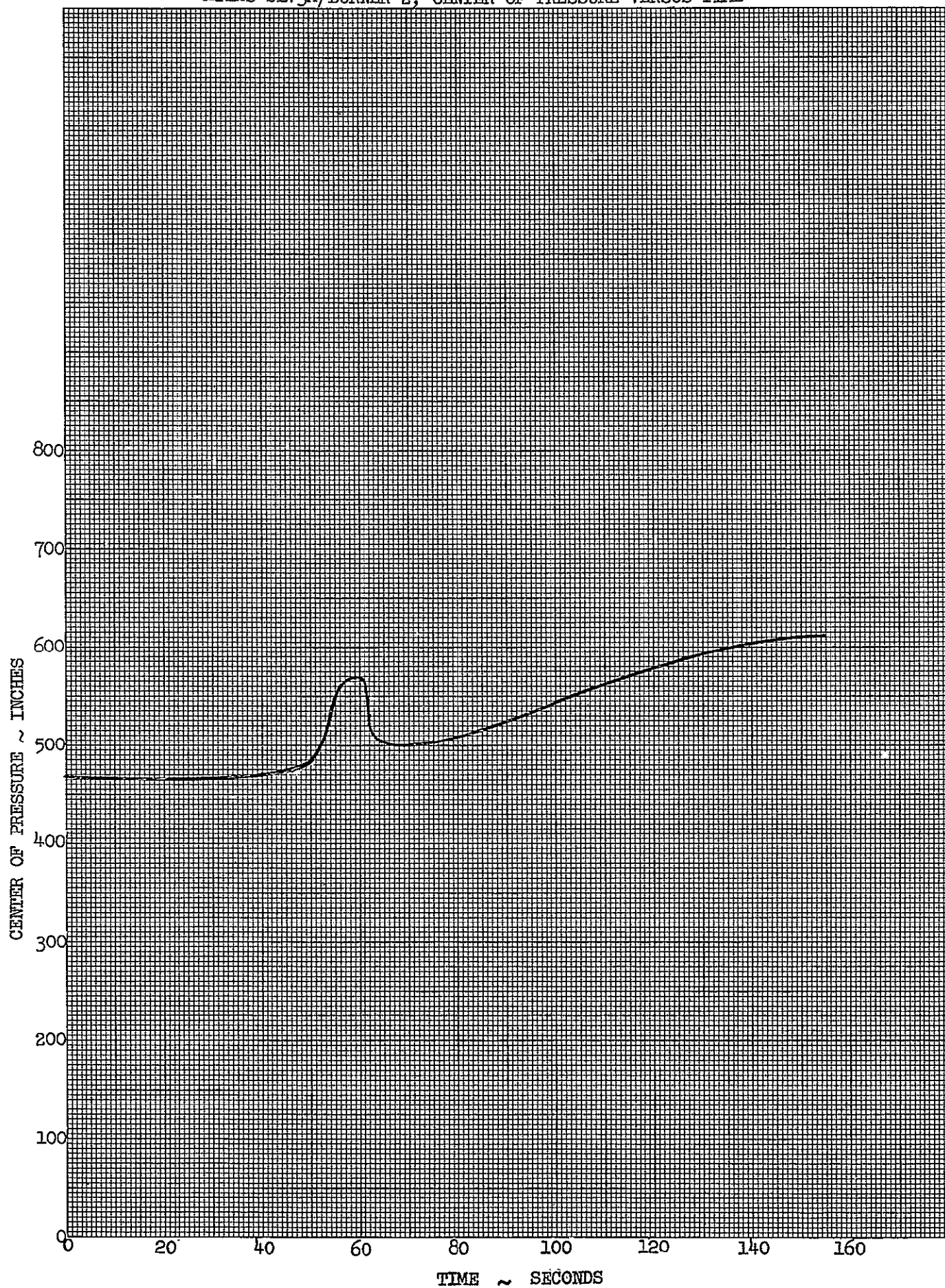
ATLAS SLV 3A/BURNER 2, CENTER OF GRAVITY VERSUS TIME, BOOSTER PHASE

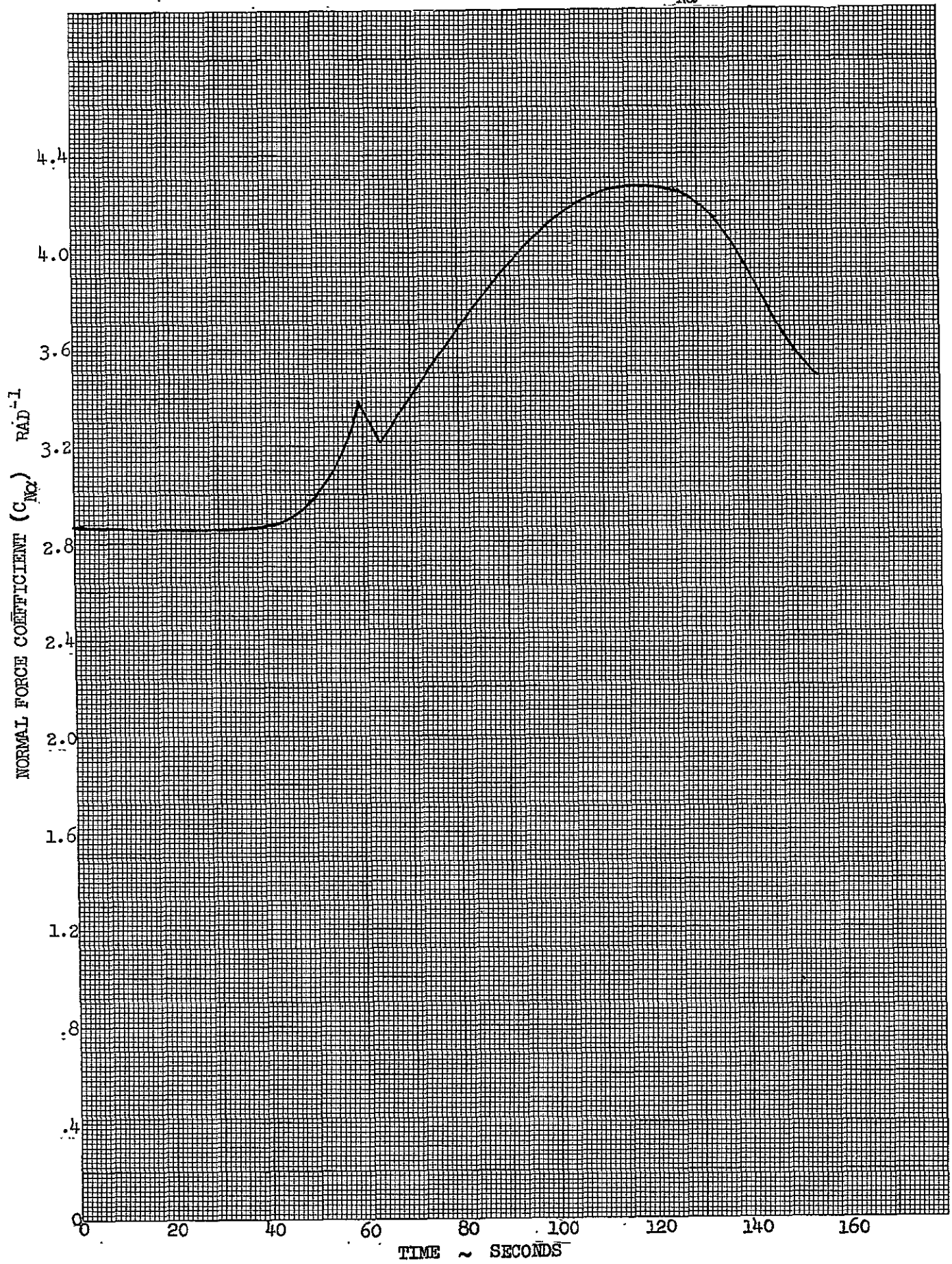


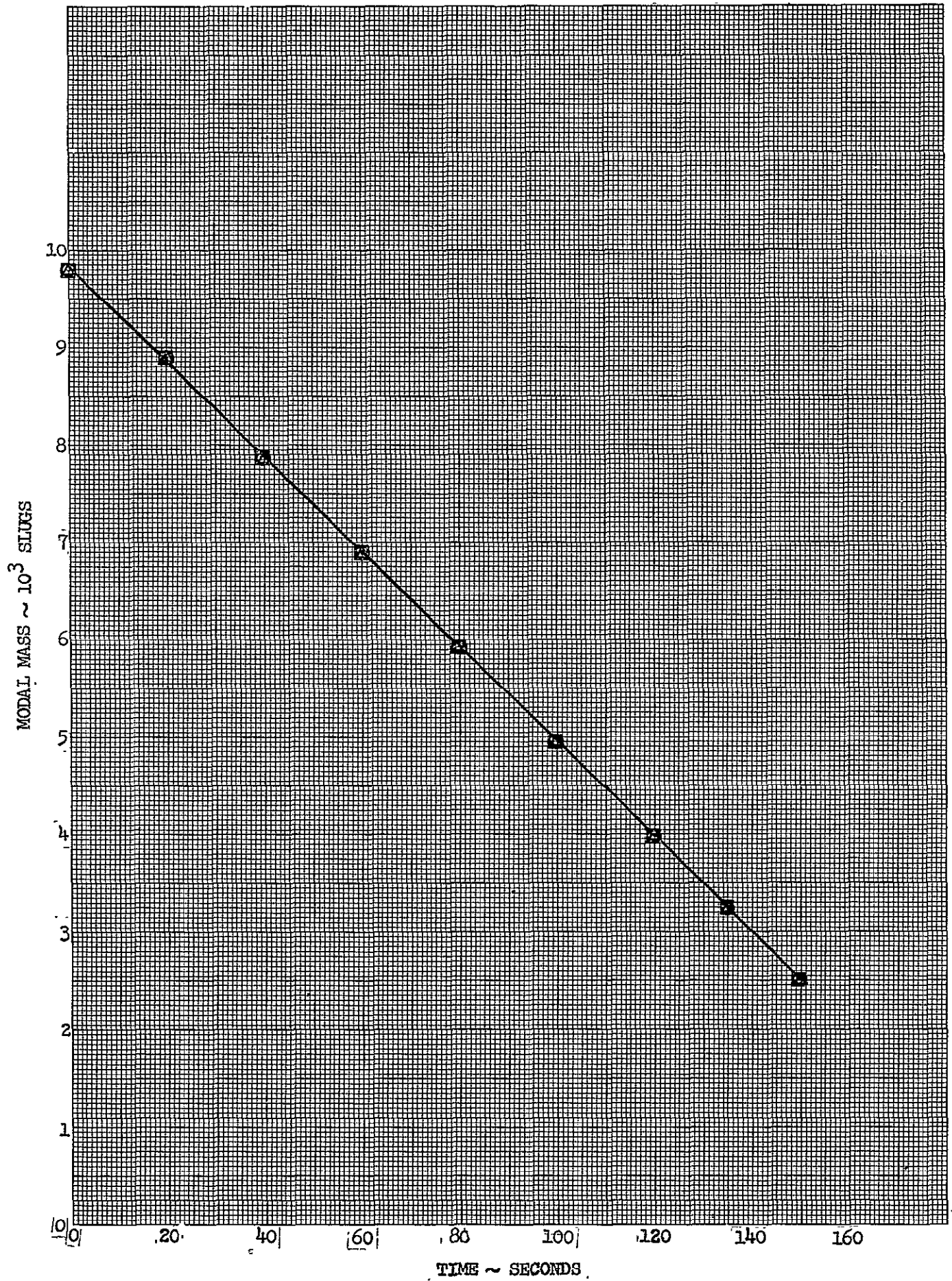
ATLAS SLV 3A/BURNER 2, CENTER OF GRAVITY VERSUS TIME, SUSTAINER PHASE

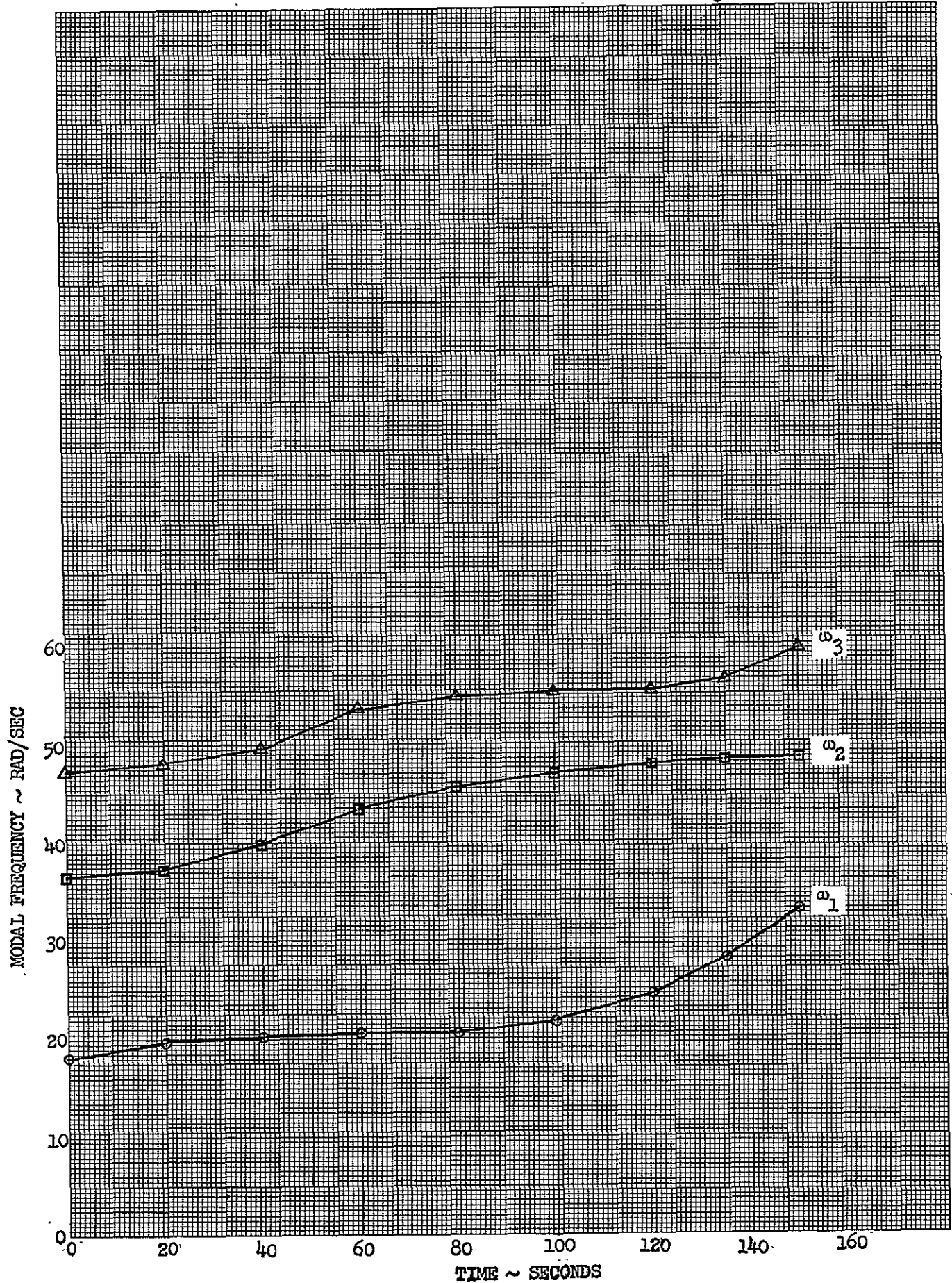


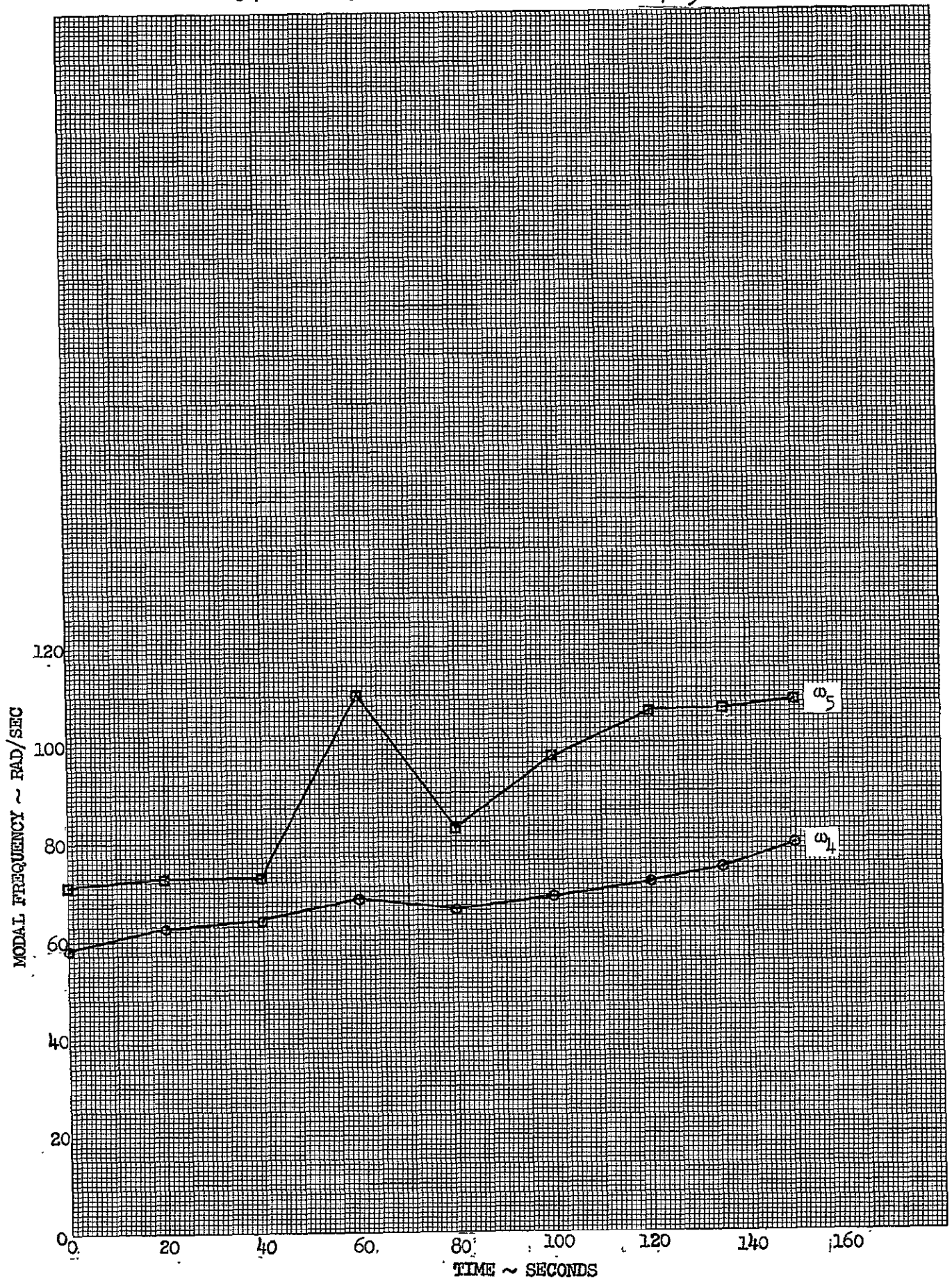
ATLAS SLV3A/BURNER 2, CENTER OF PRESSURE VERSUS TIME

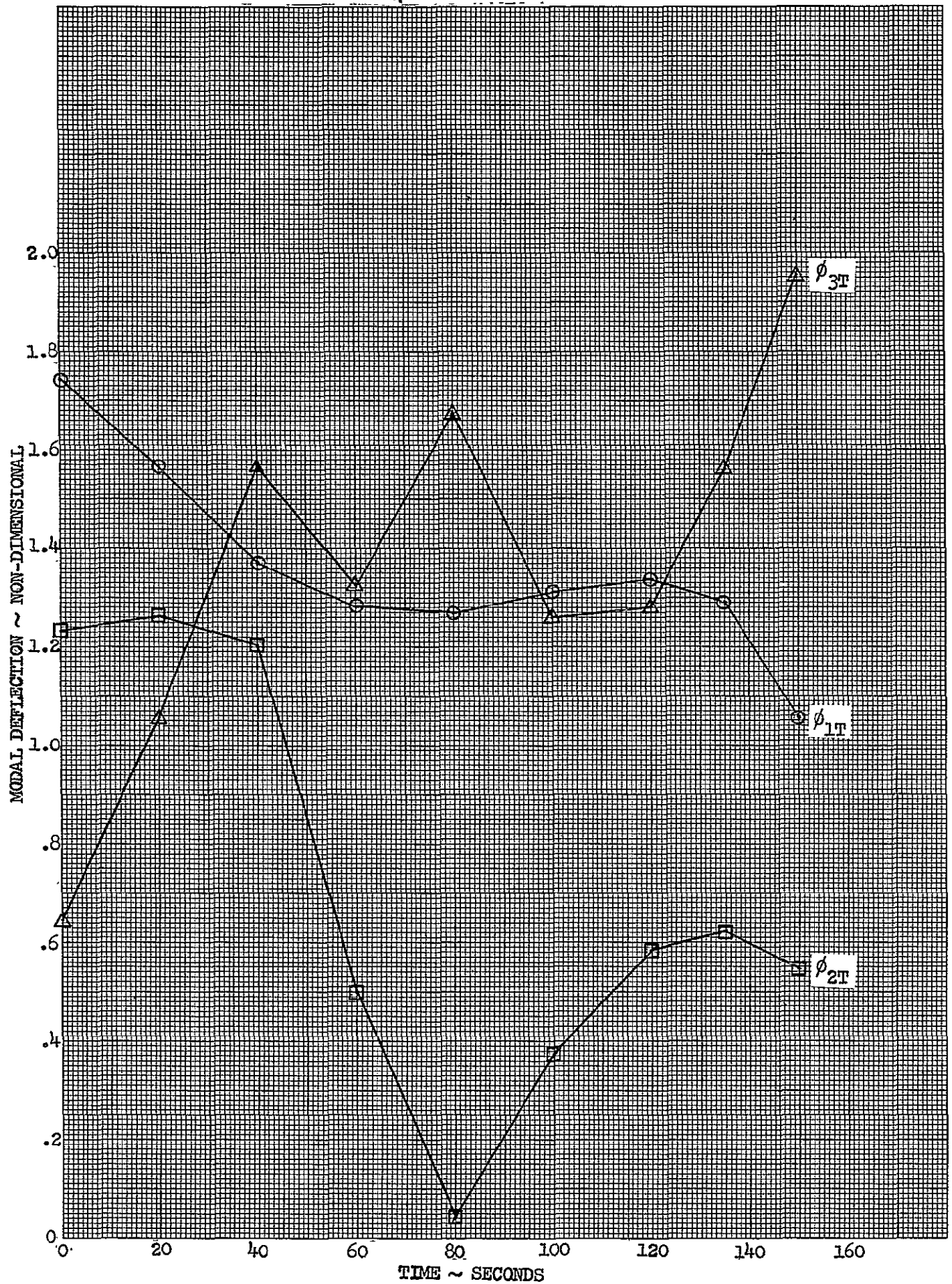


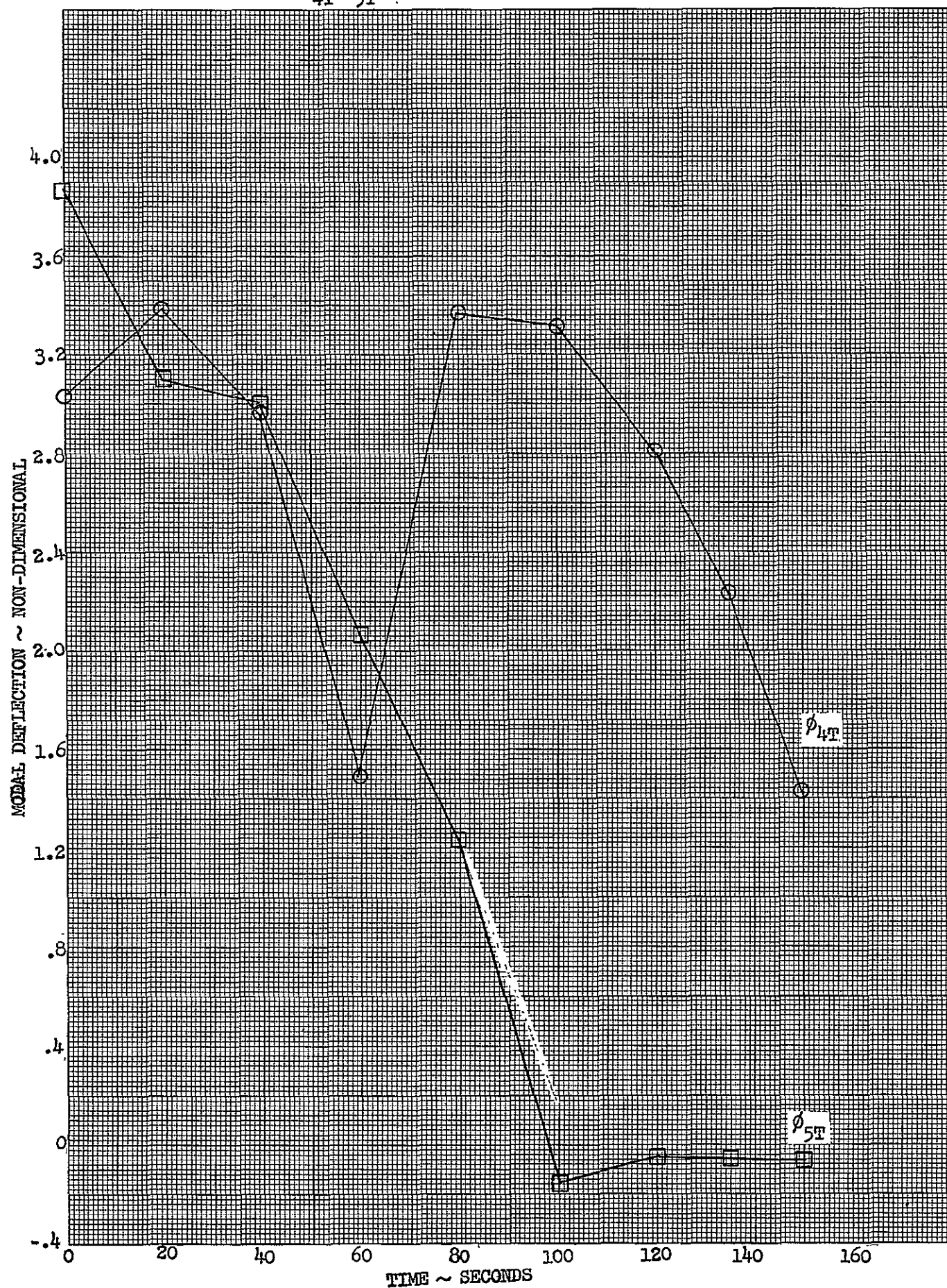


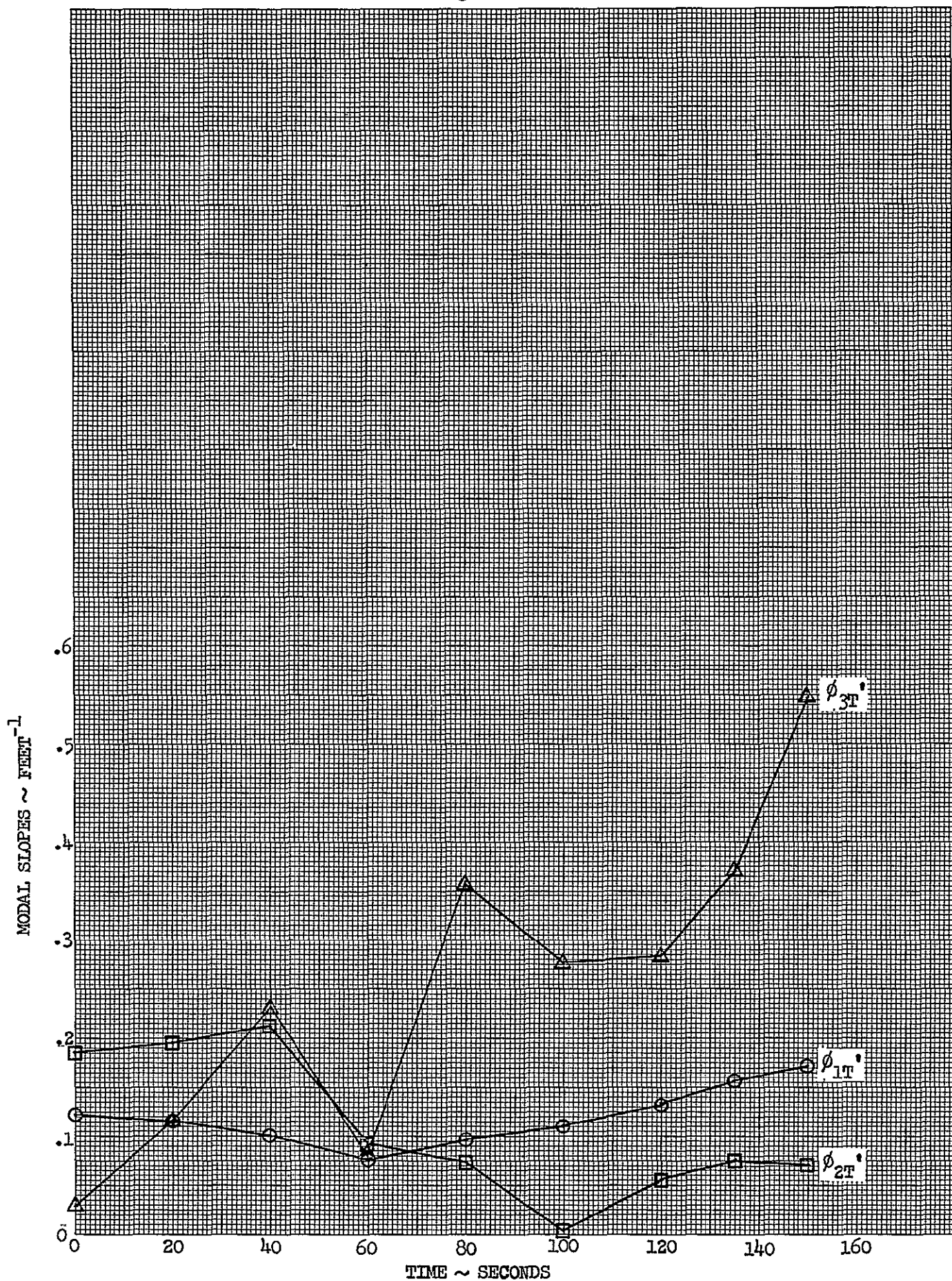


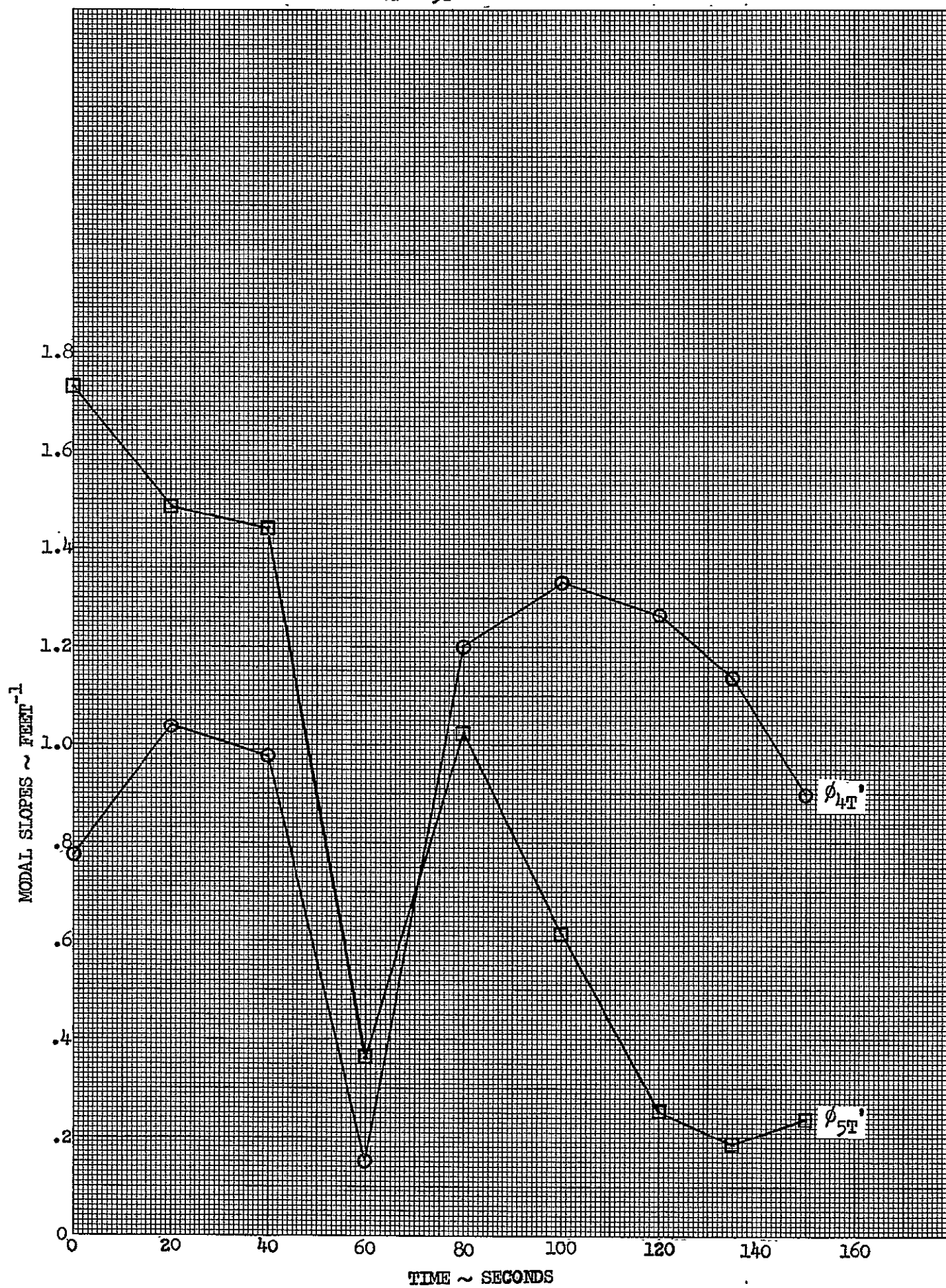


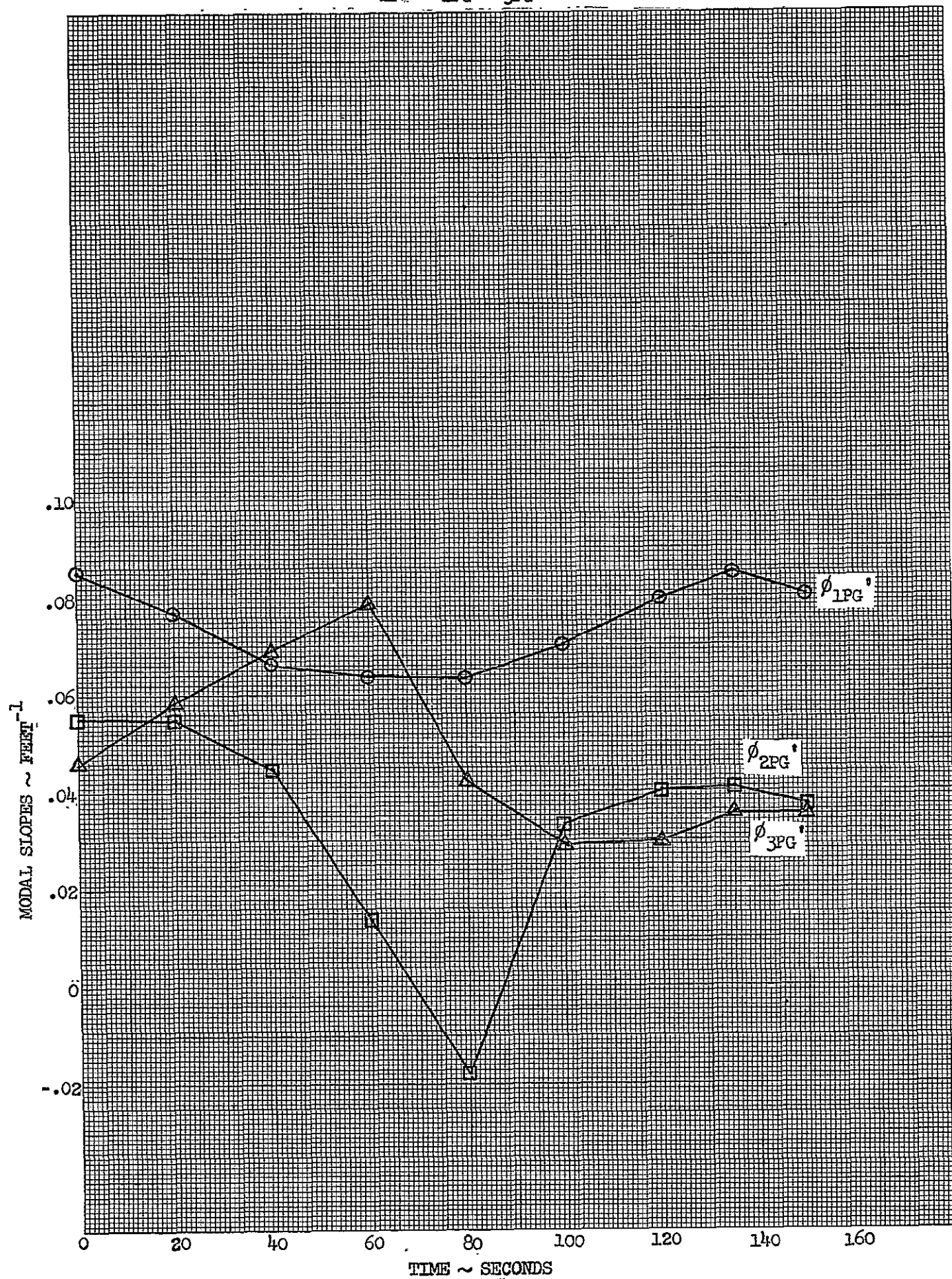


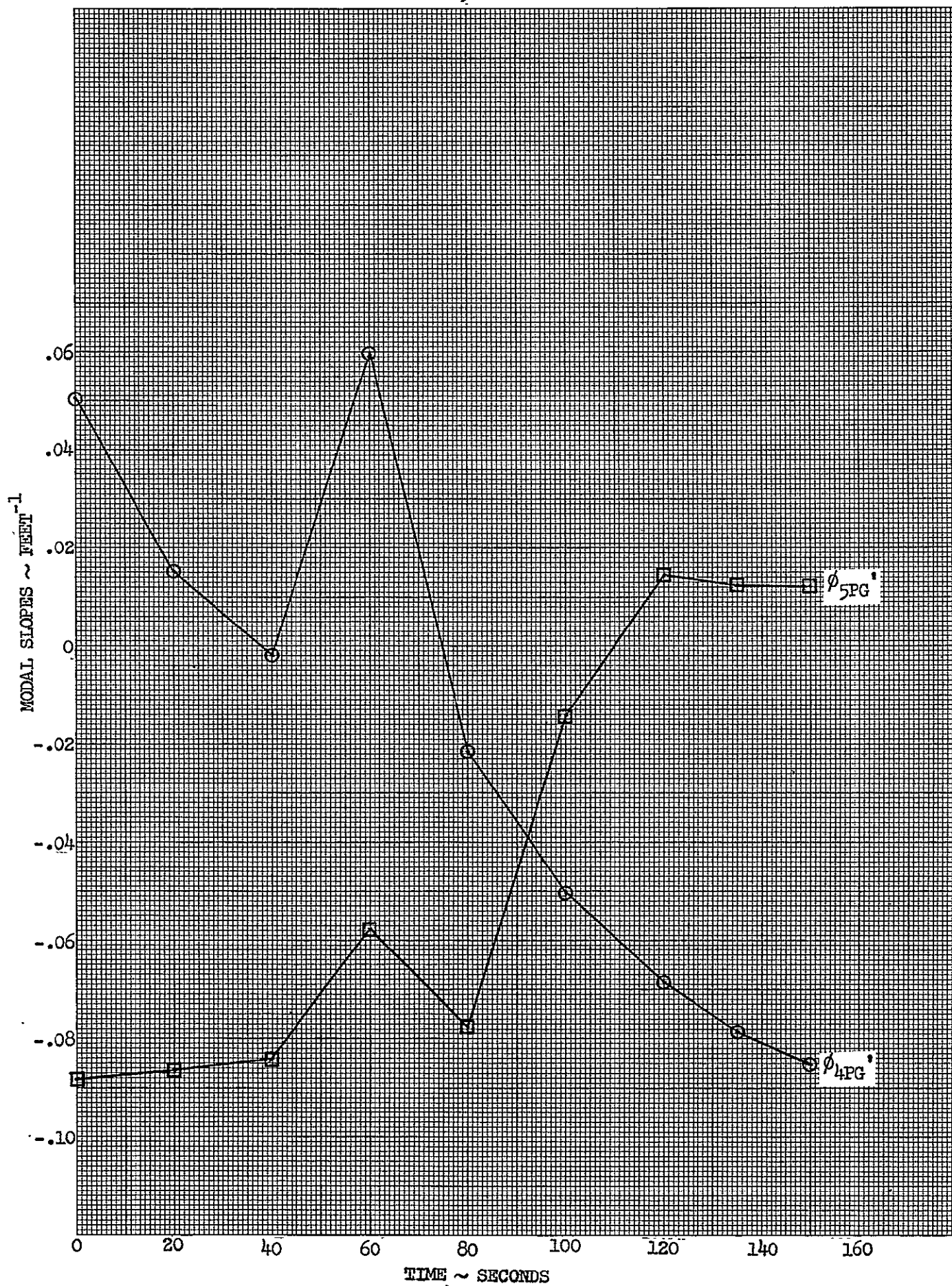


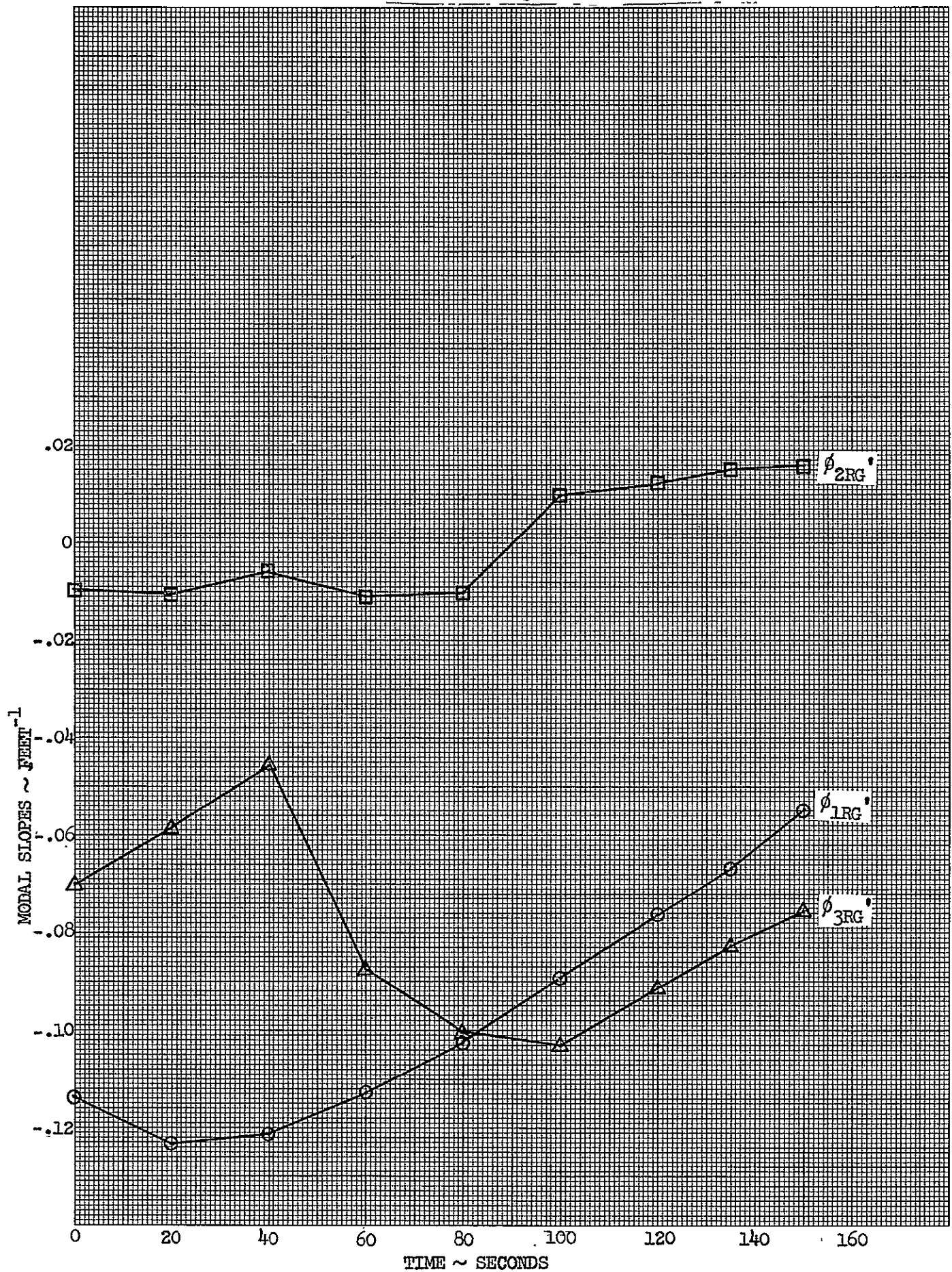


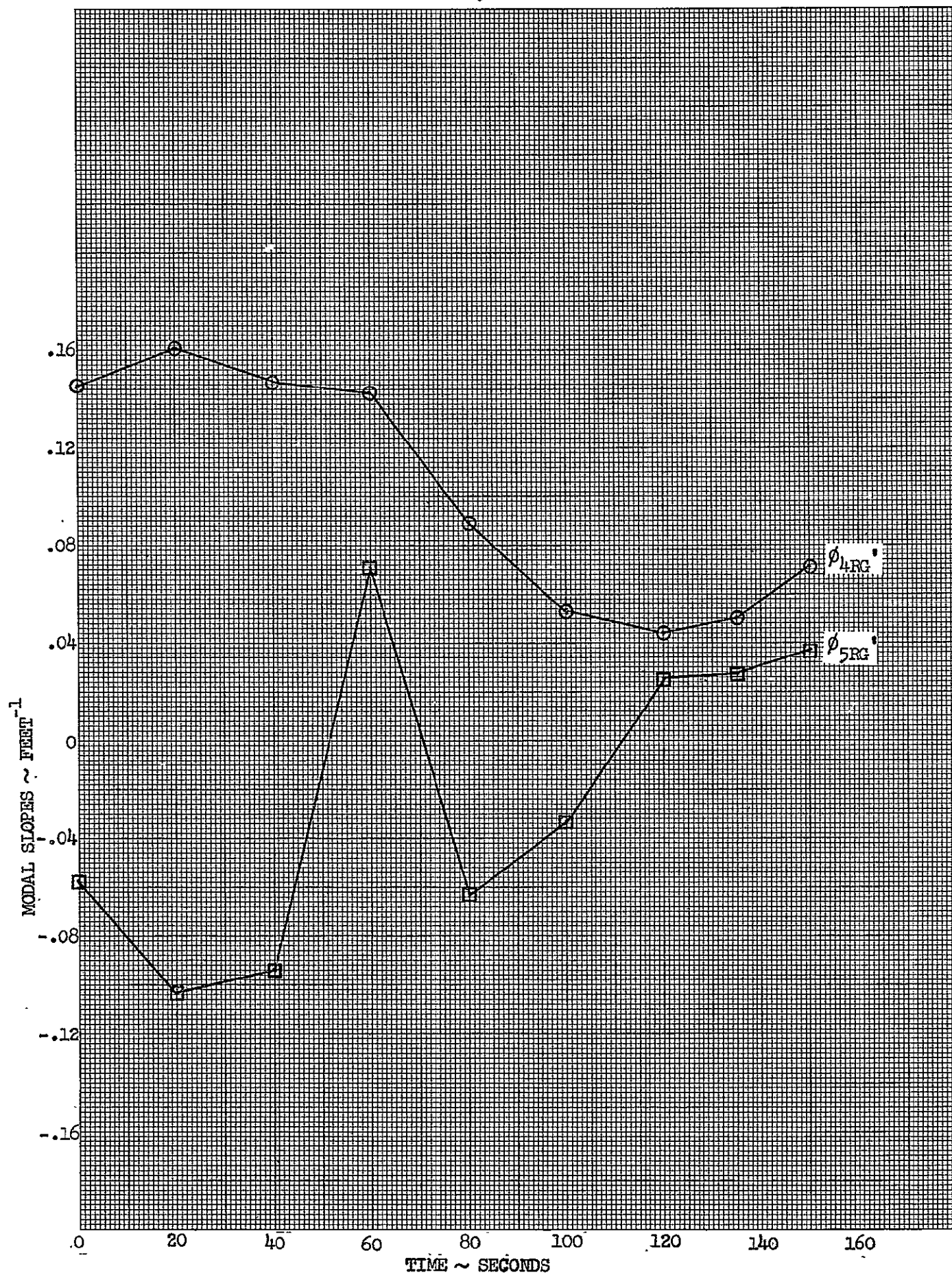


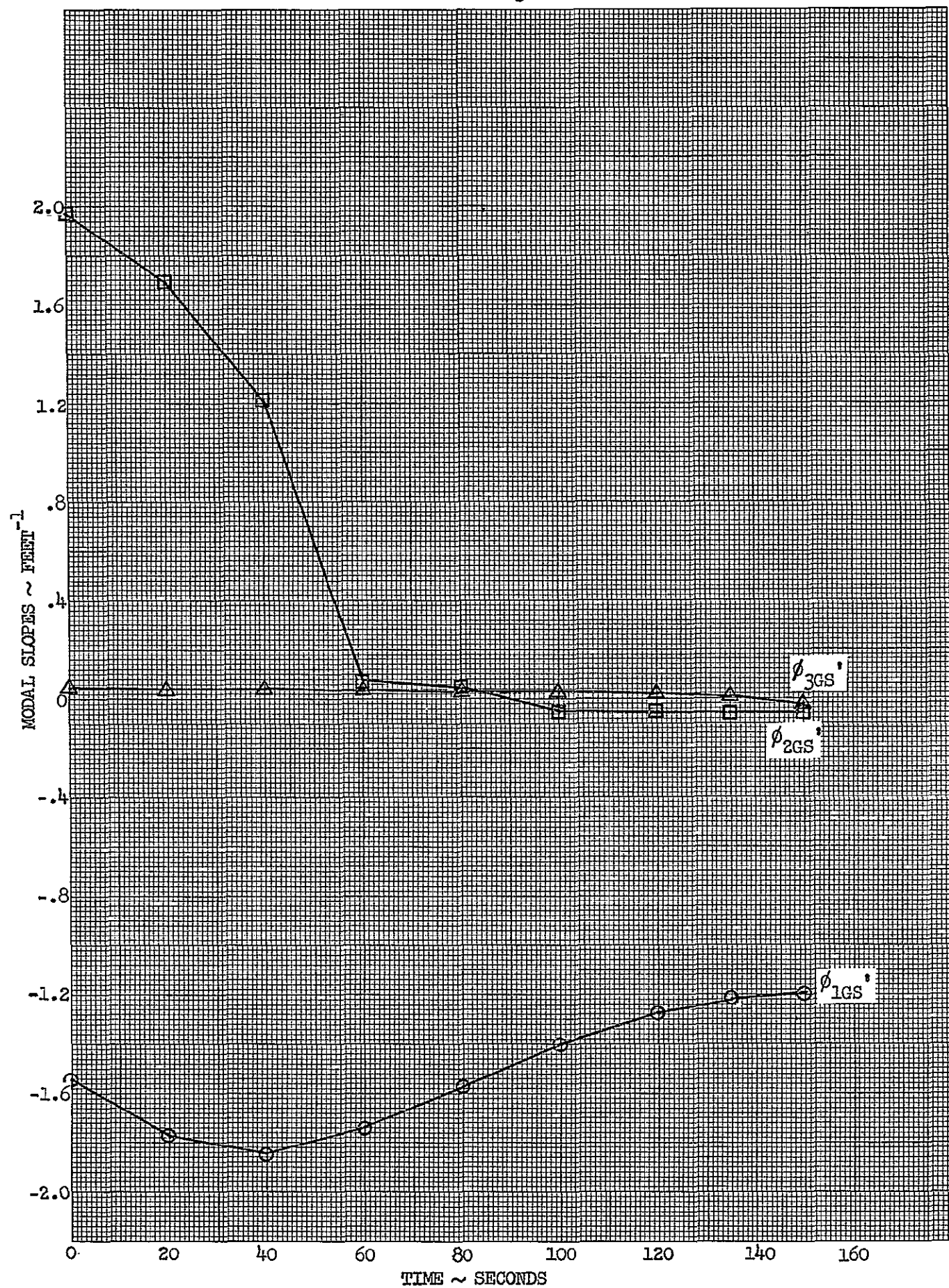


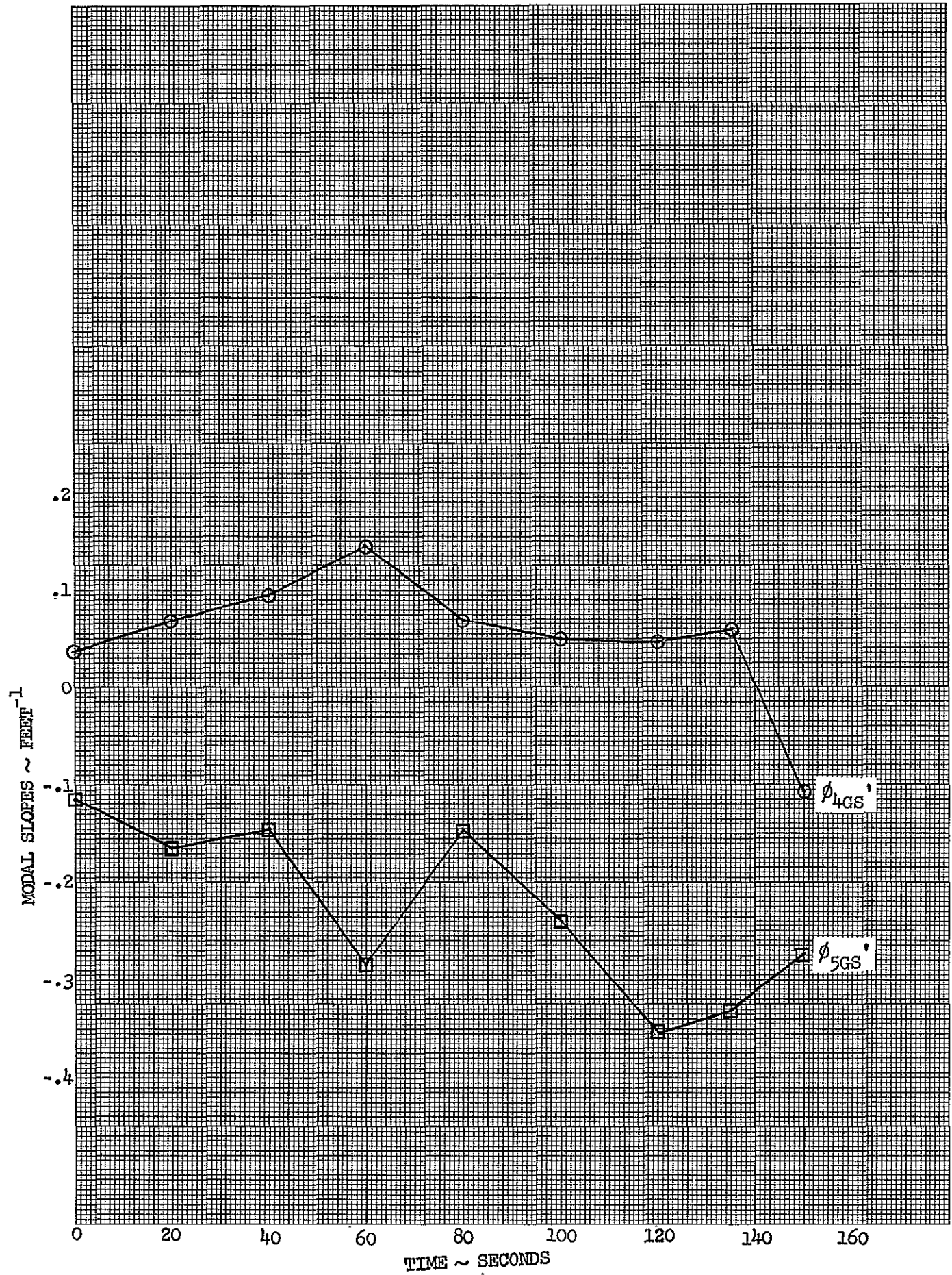


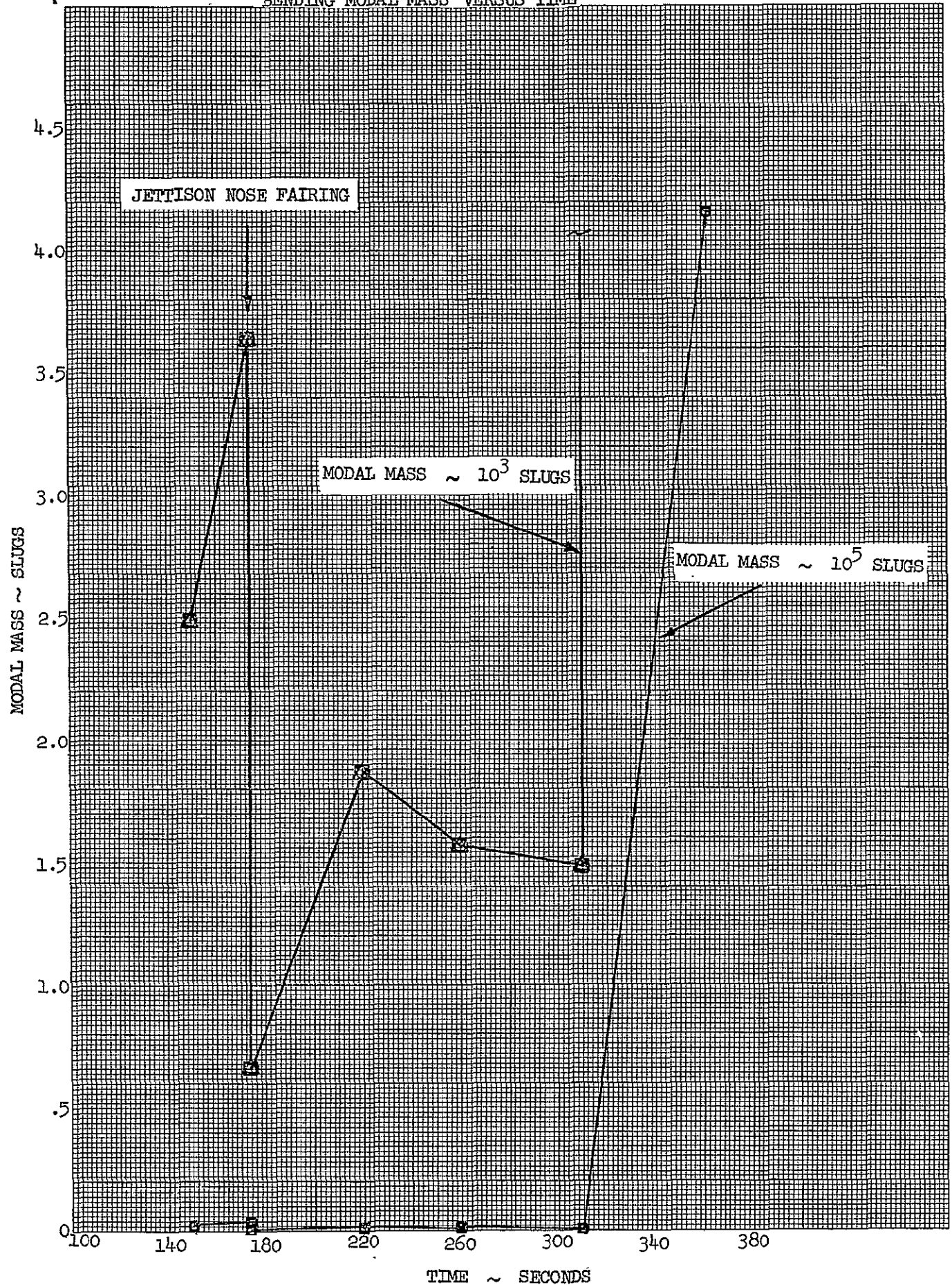


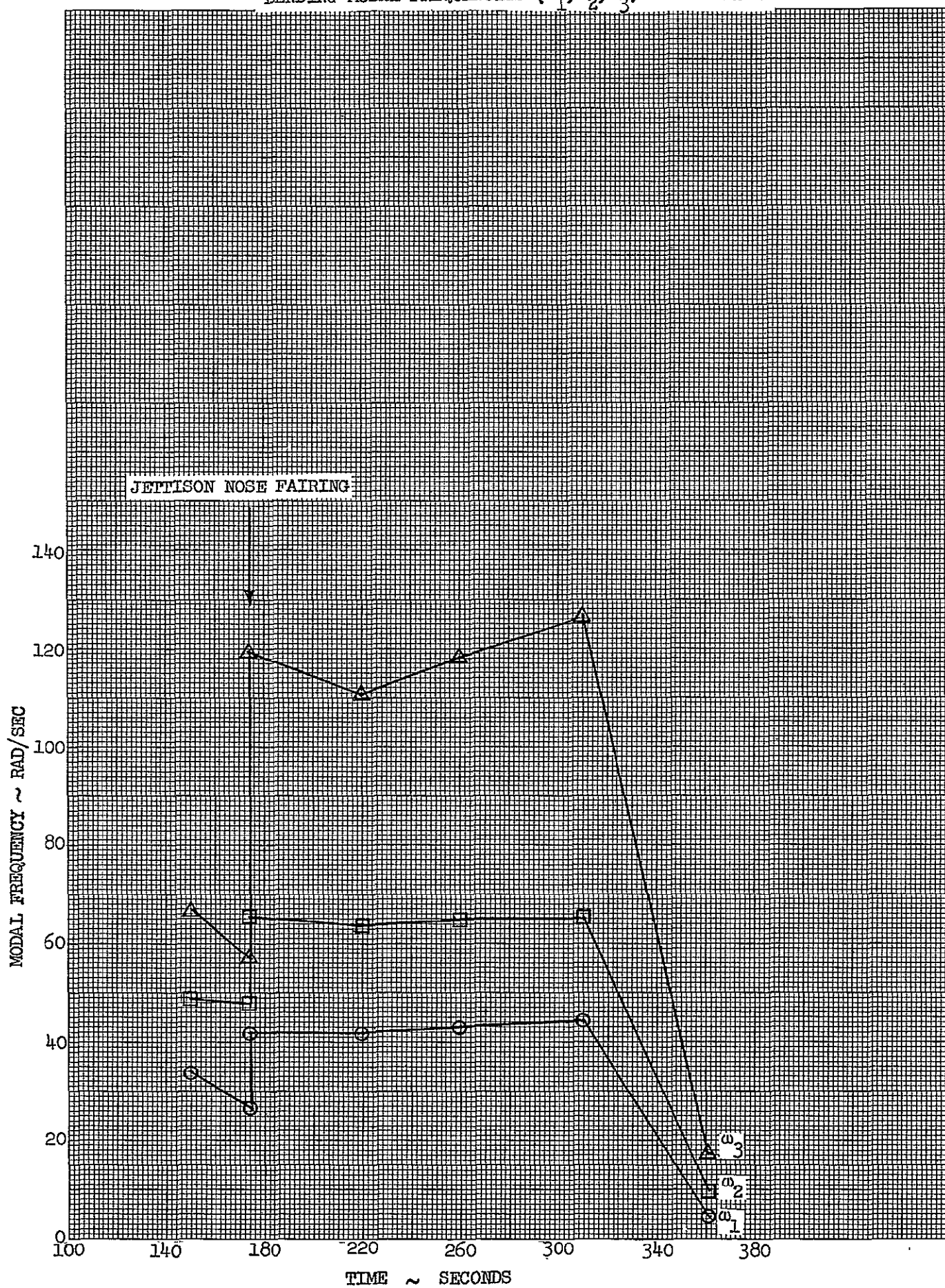


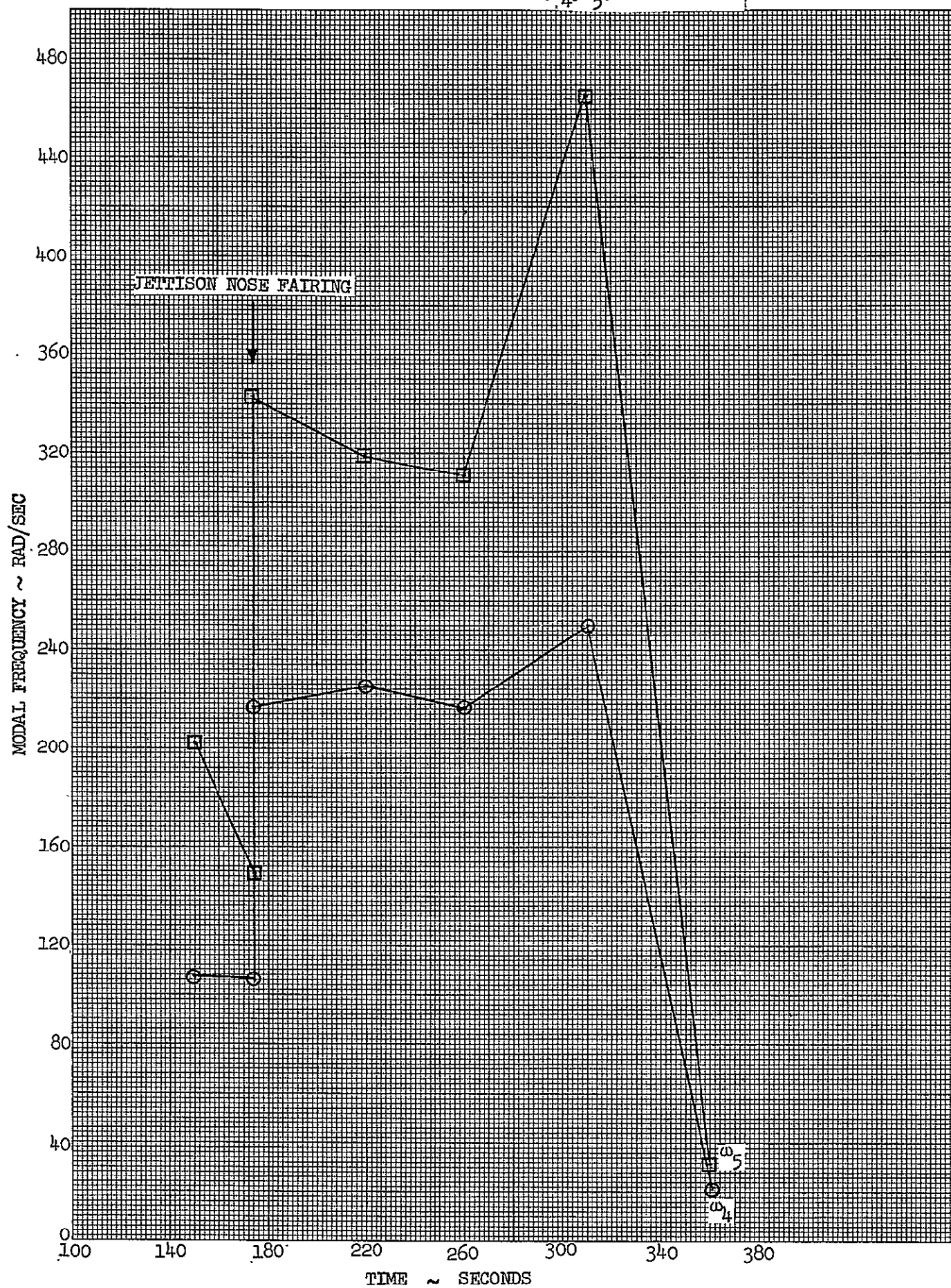






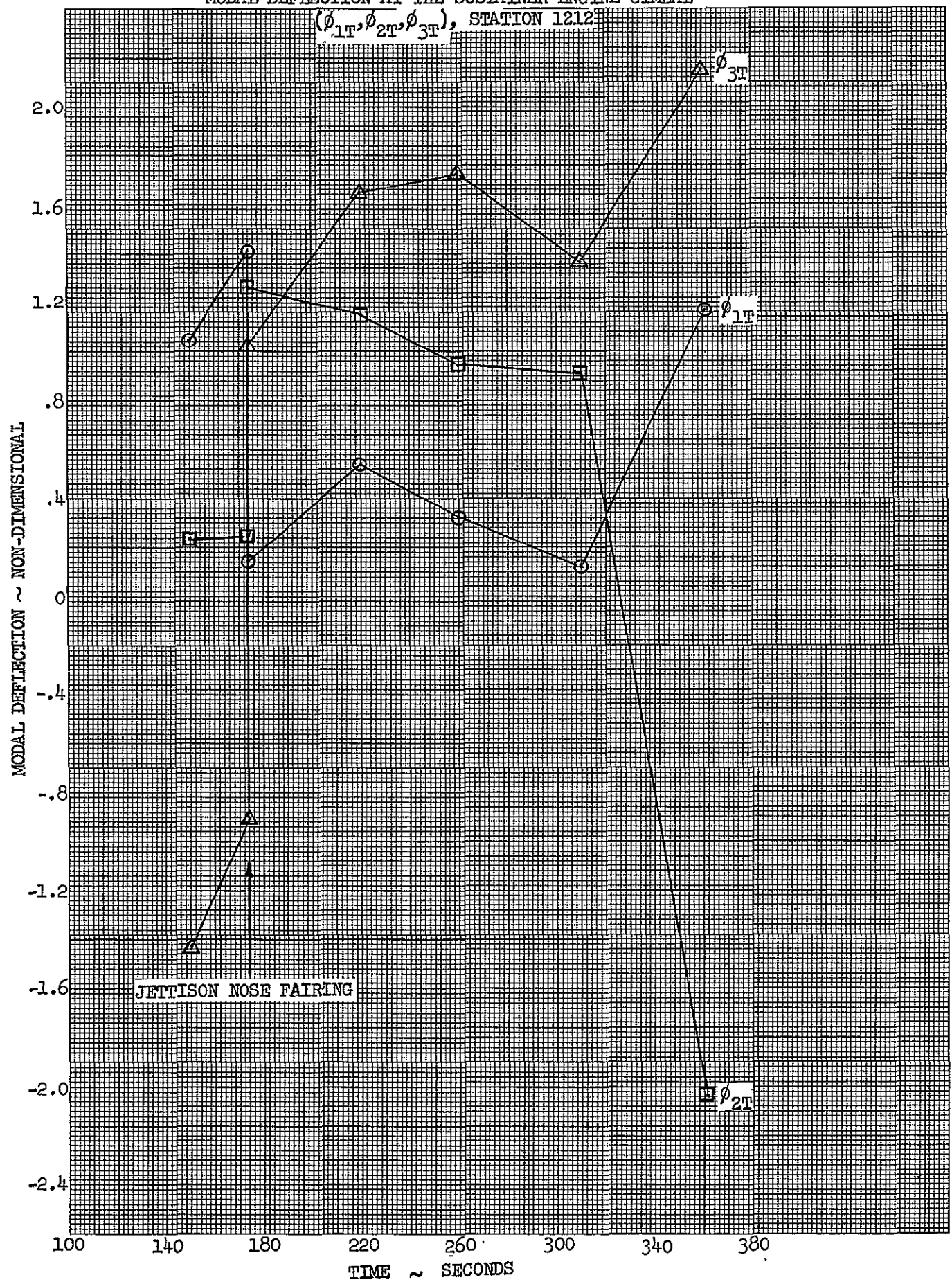




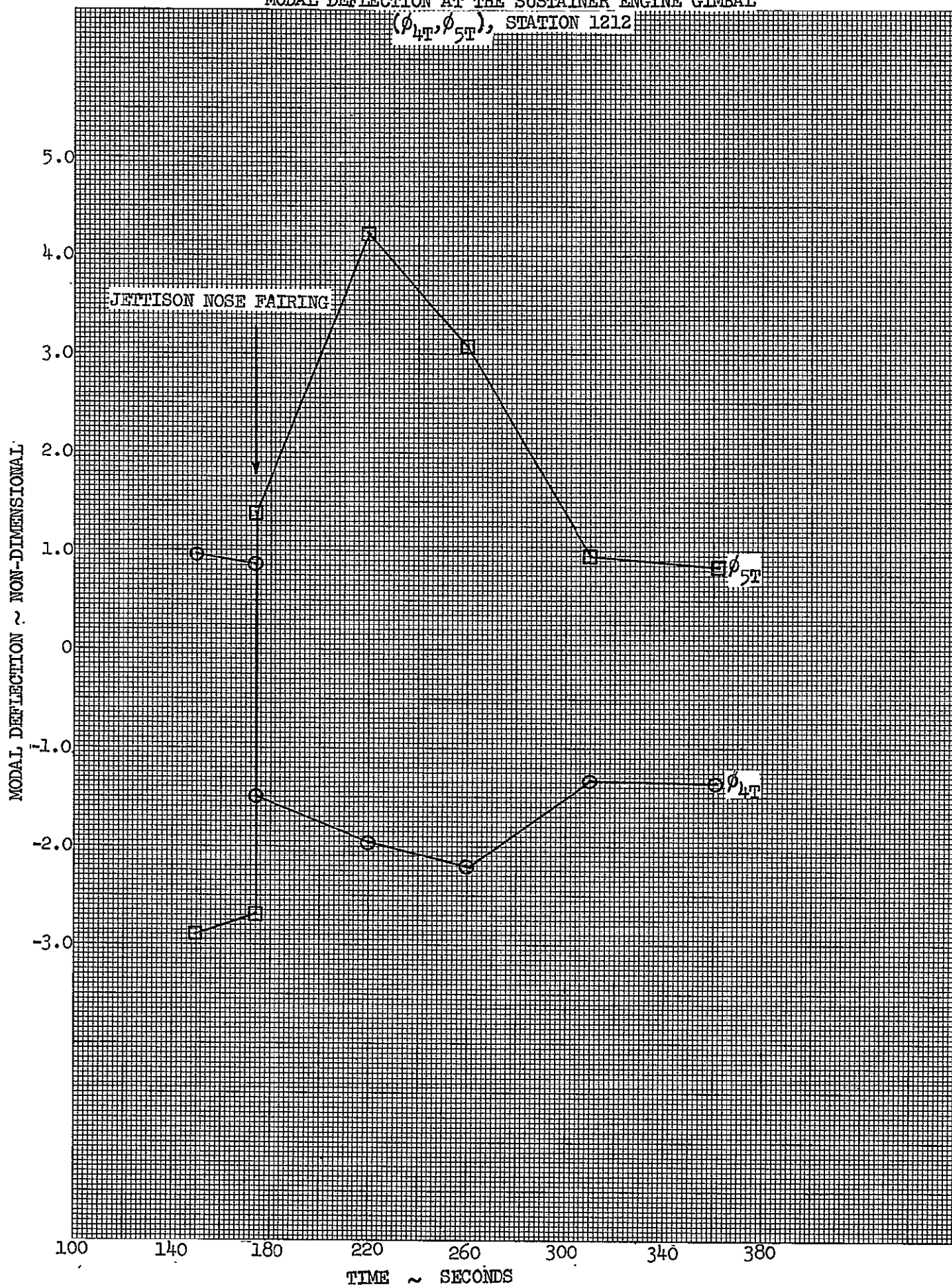


ATLAS SLV3A/BURNER 2, SUSTAINER PHASE
 MODAL DEFLECTION AT THE SUSTAINER ENGINE GIMBAL

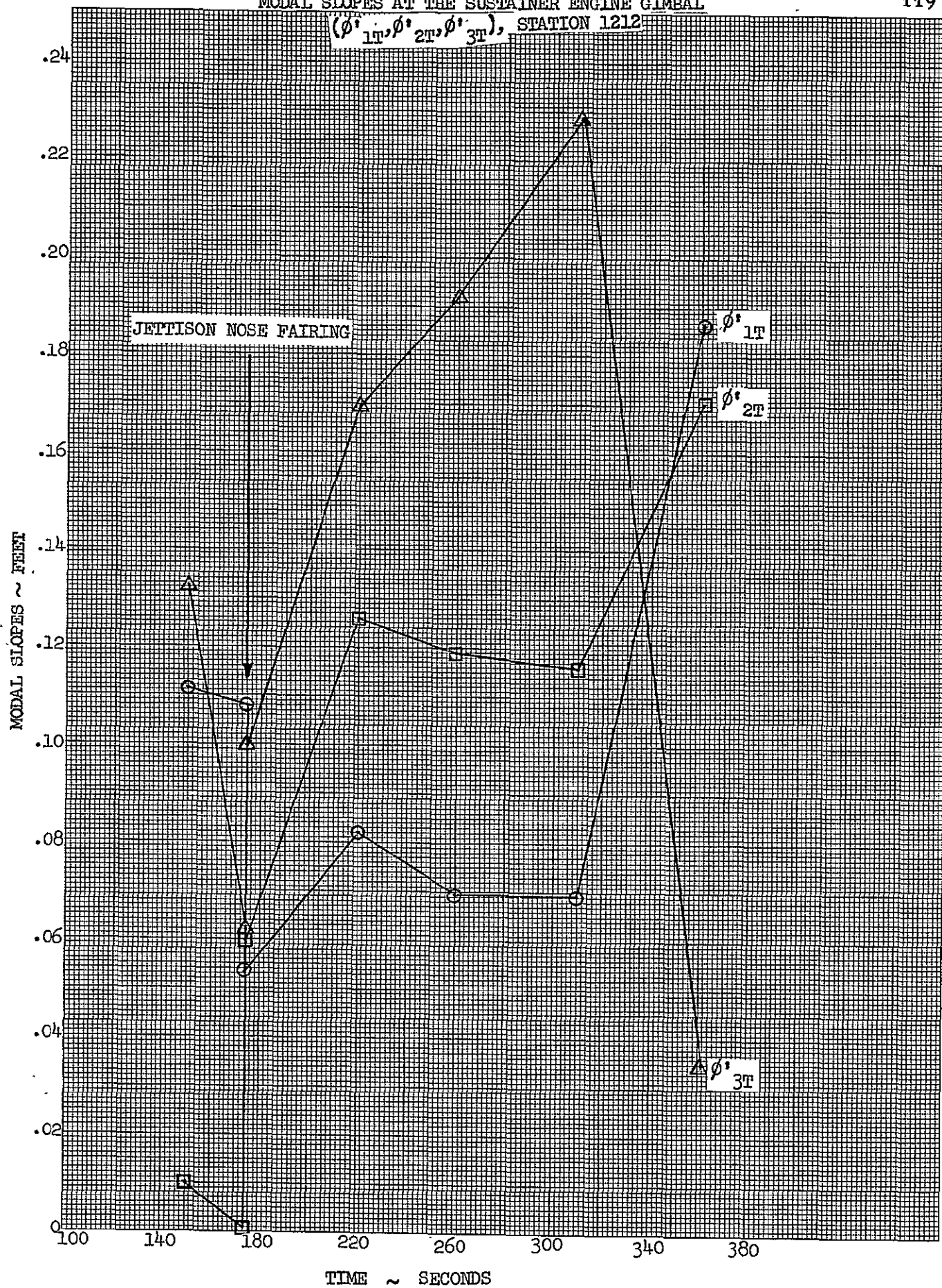
117

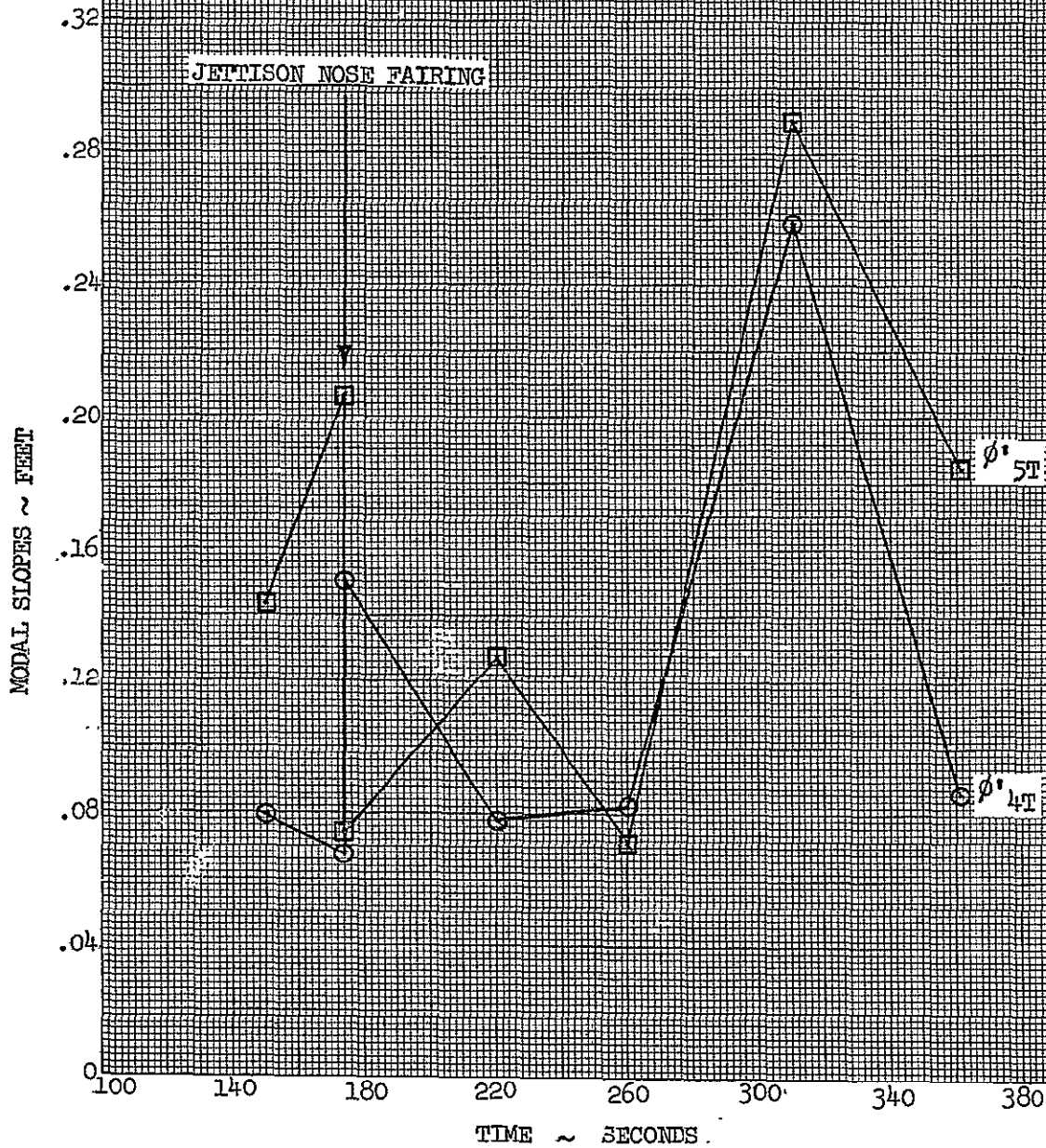


(ϕ_{4T}, ϕ_{5T}) , STATION 1212



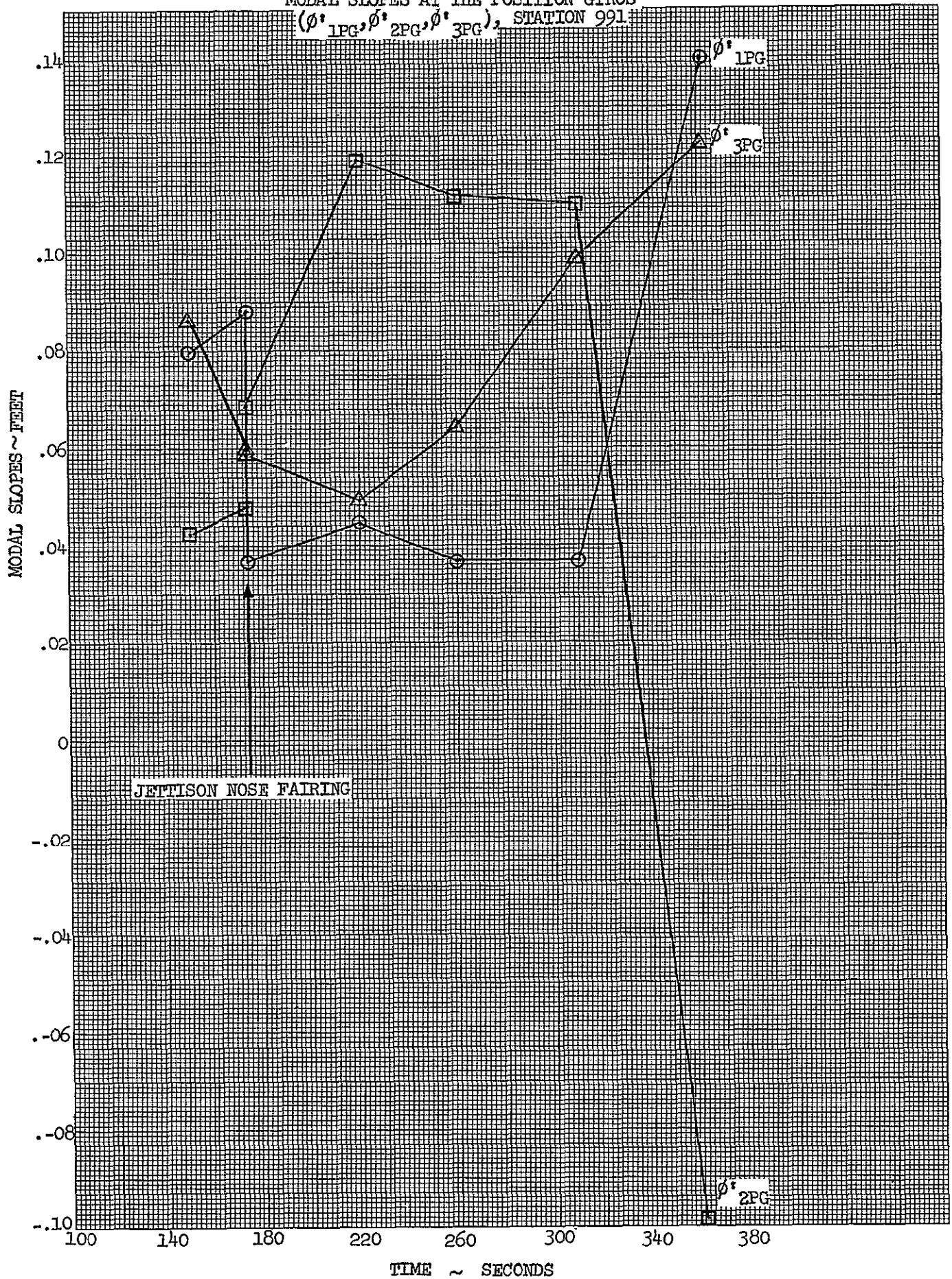
($\phi'_{1T}, \phi'_{2T}, \phi'_{3T}$), STATION 1212



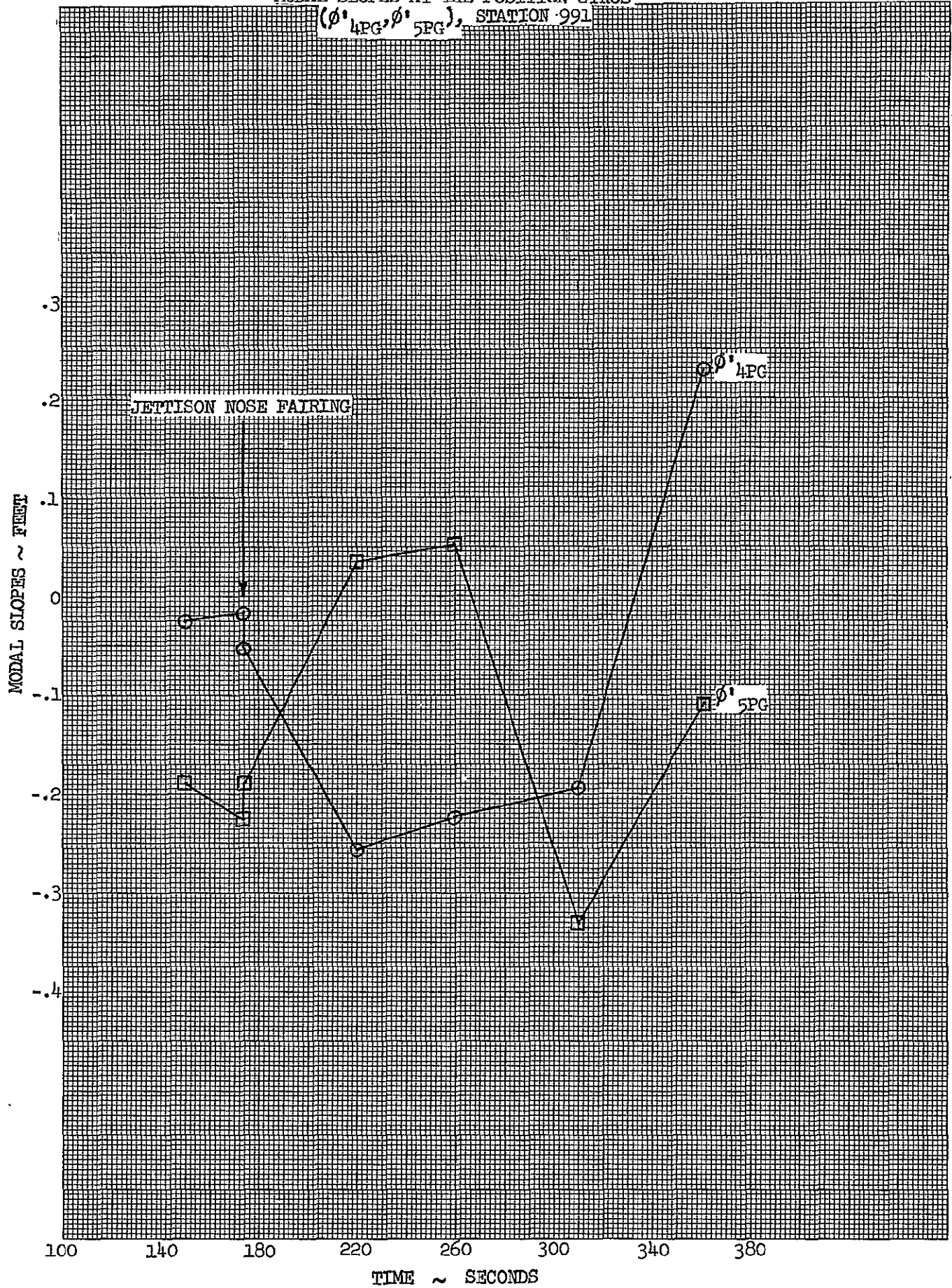


ATLAS SLV3A/BURNER 2, SUSTAINER PHASE
 MODAL SLOPES AT THE POSITION GYROS
 (ϕ^1 1PG, ϕ^2 2PG, ϕ^3 3PG), STATION 991

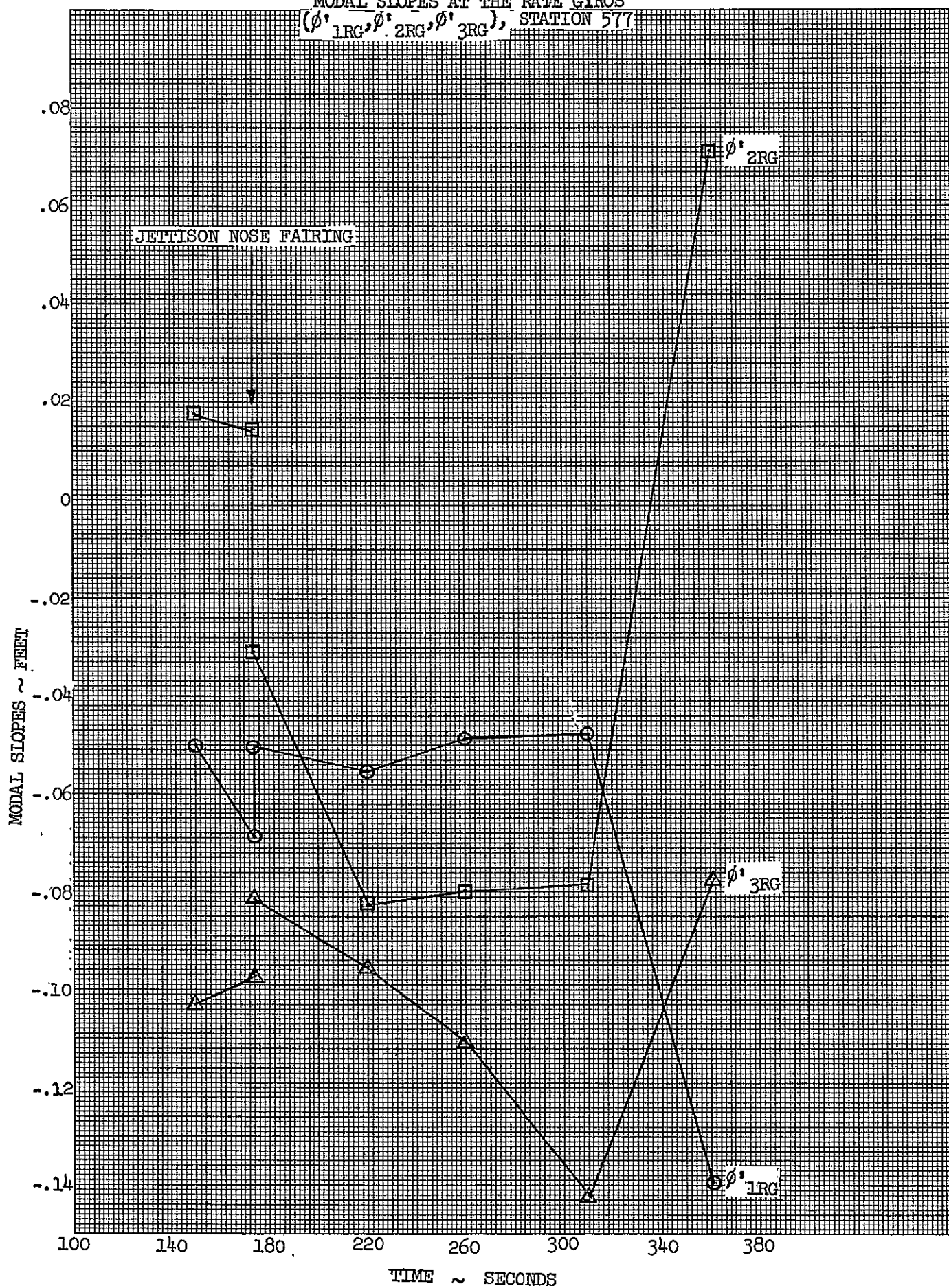
121



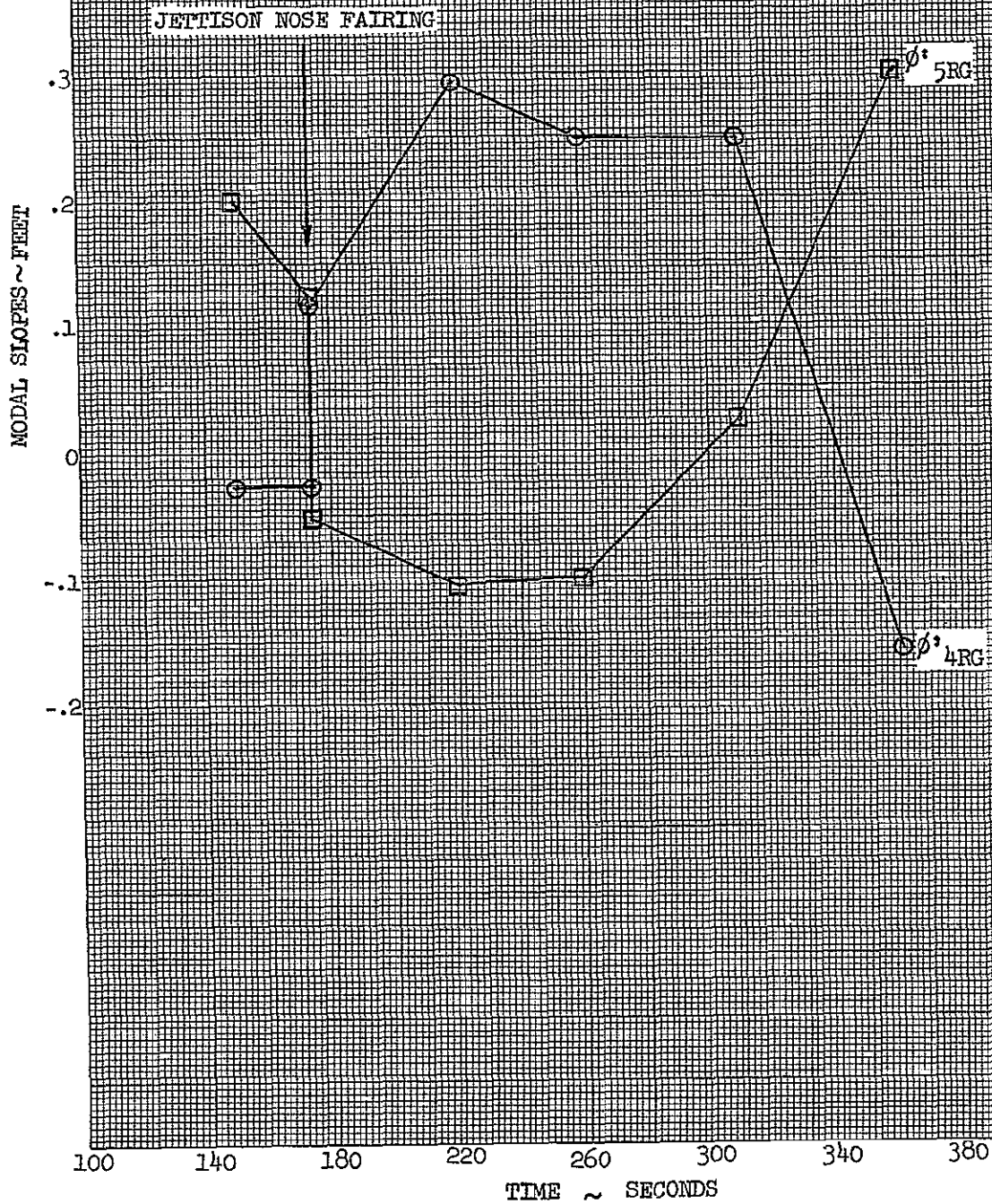
(ϕ' , ϕ'), STATION 991
4PG, 5PG

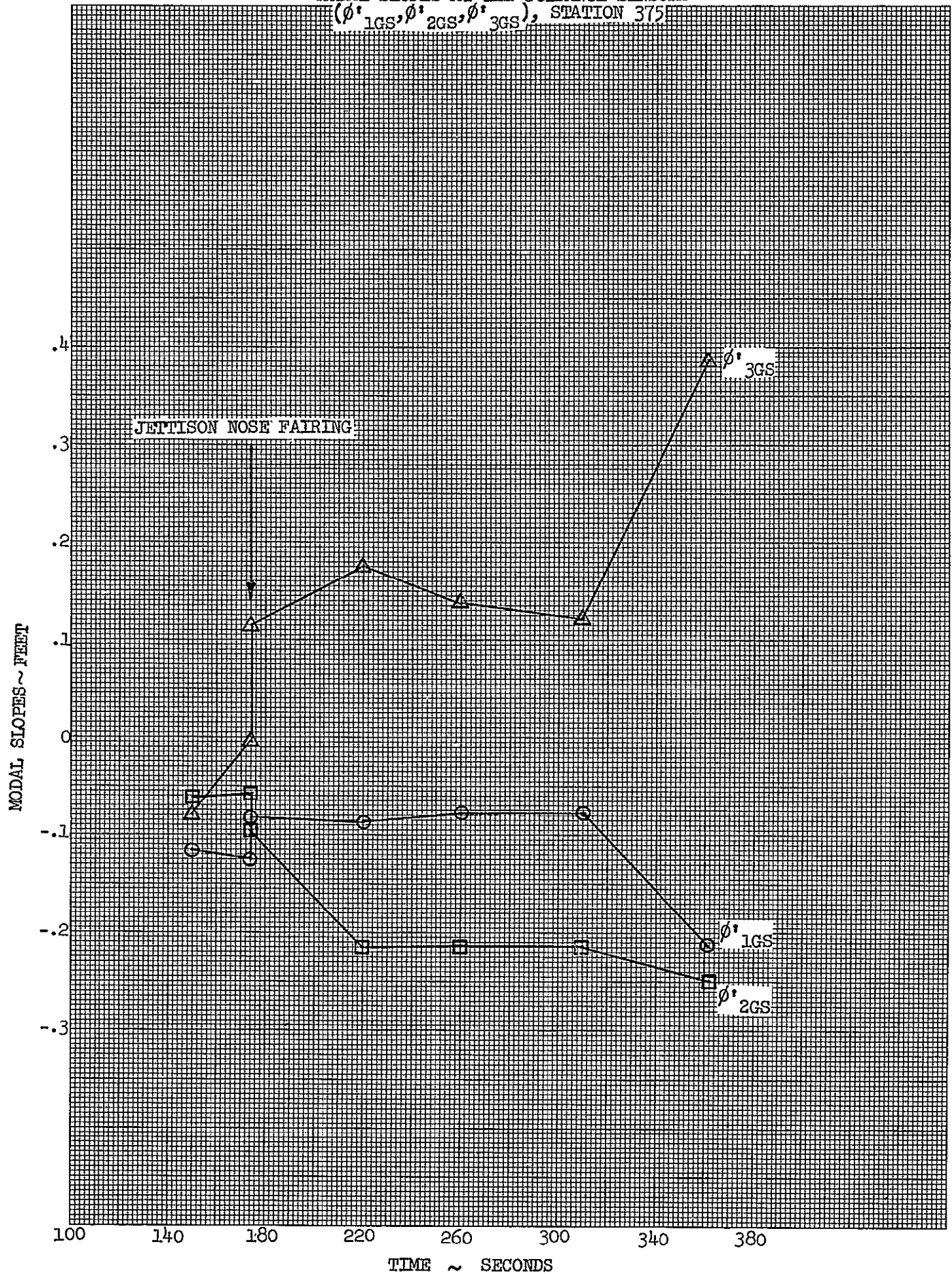


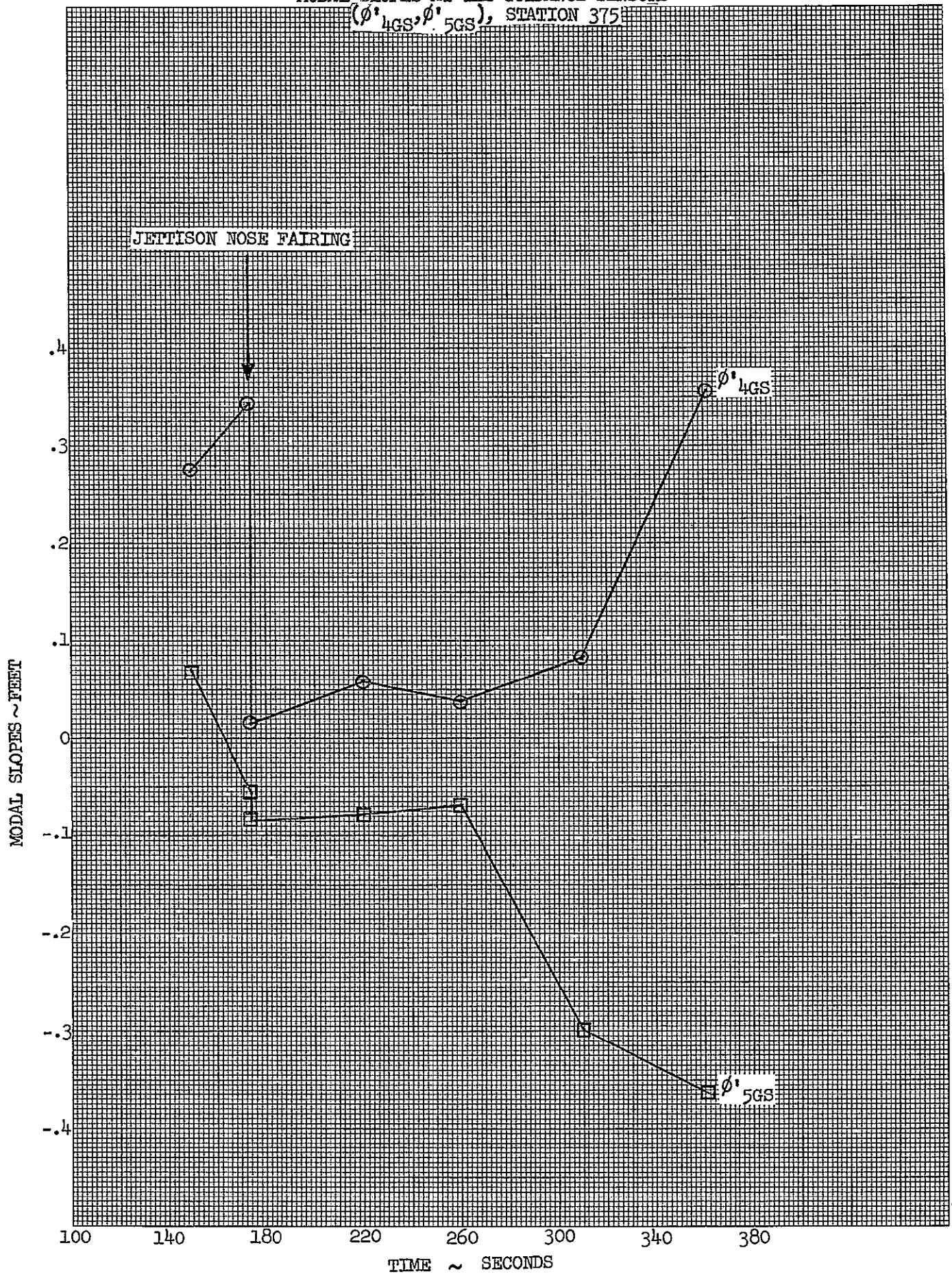
MODAL SLOPES AT THE RATE GYROS

 $(\phi'_{1RG}, \phi'_{2RG}, \phi'_{3RG})$, STATION 577

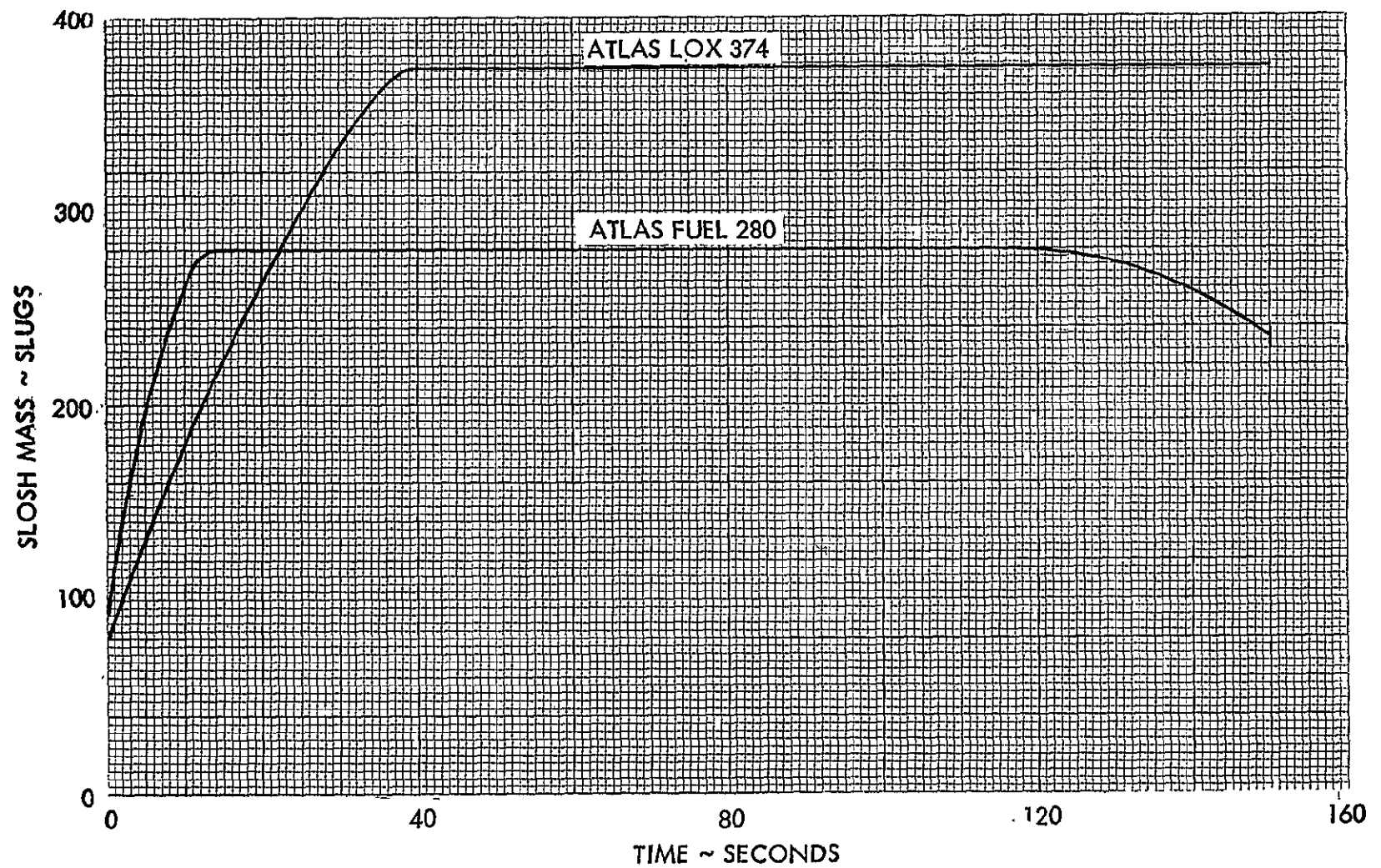
MODAL SLOPES AT THE RATE GYROS

 $(\phi'_{4RG}, \phi'_{5RG})$, STATION 577

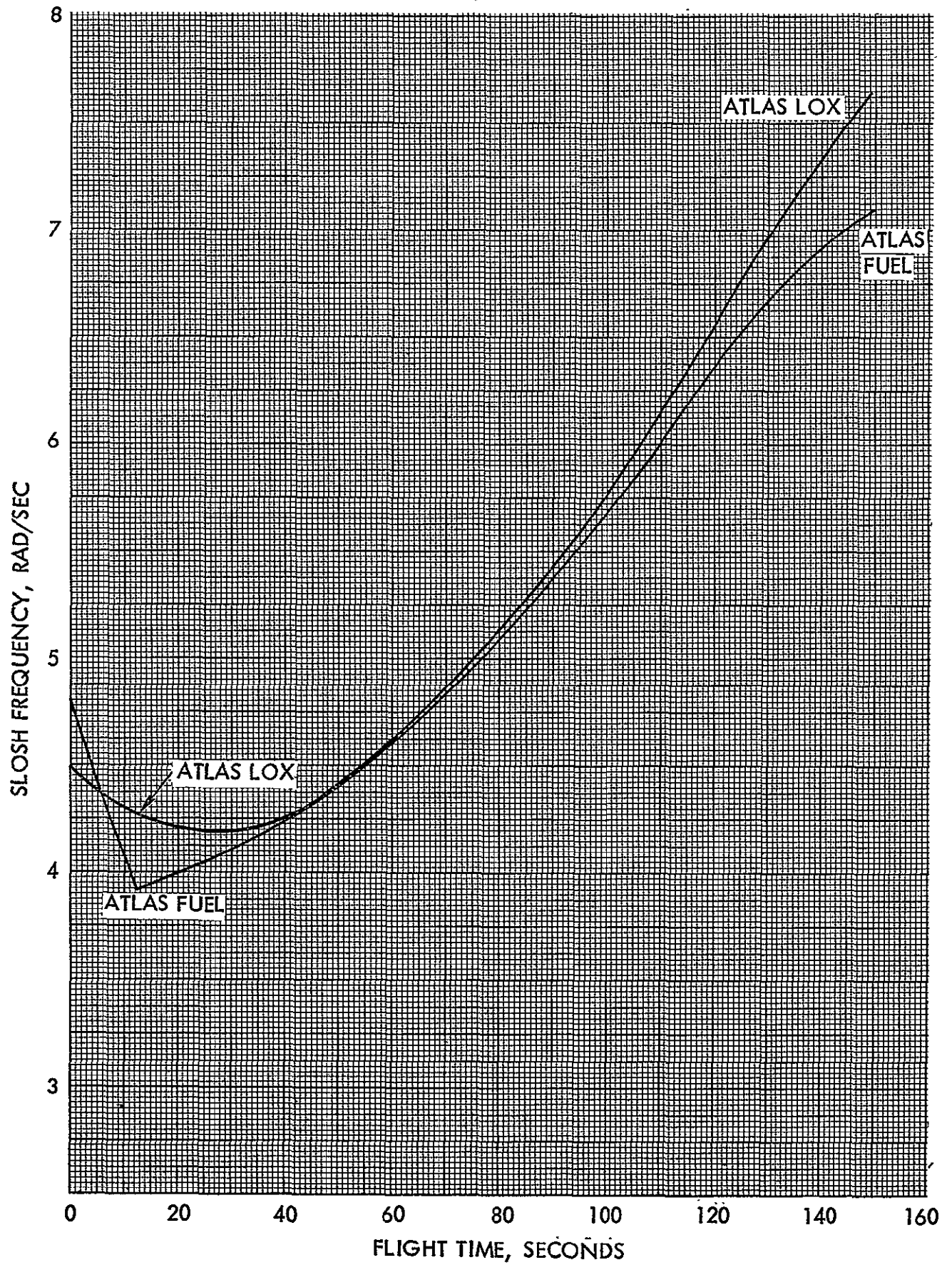




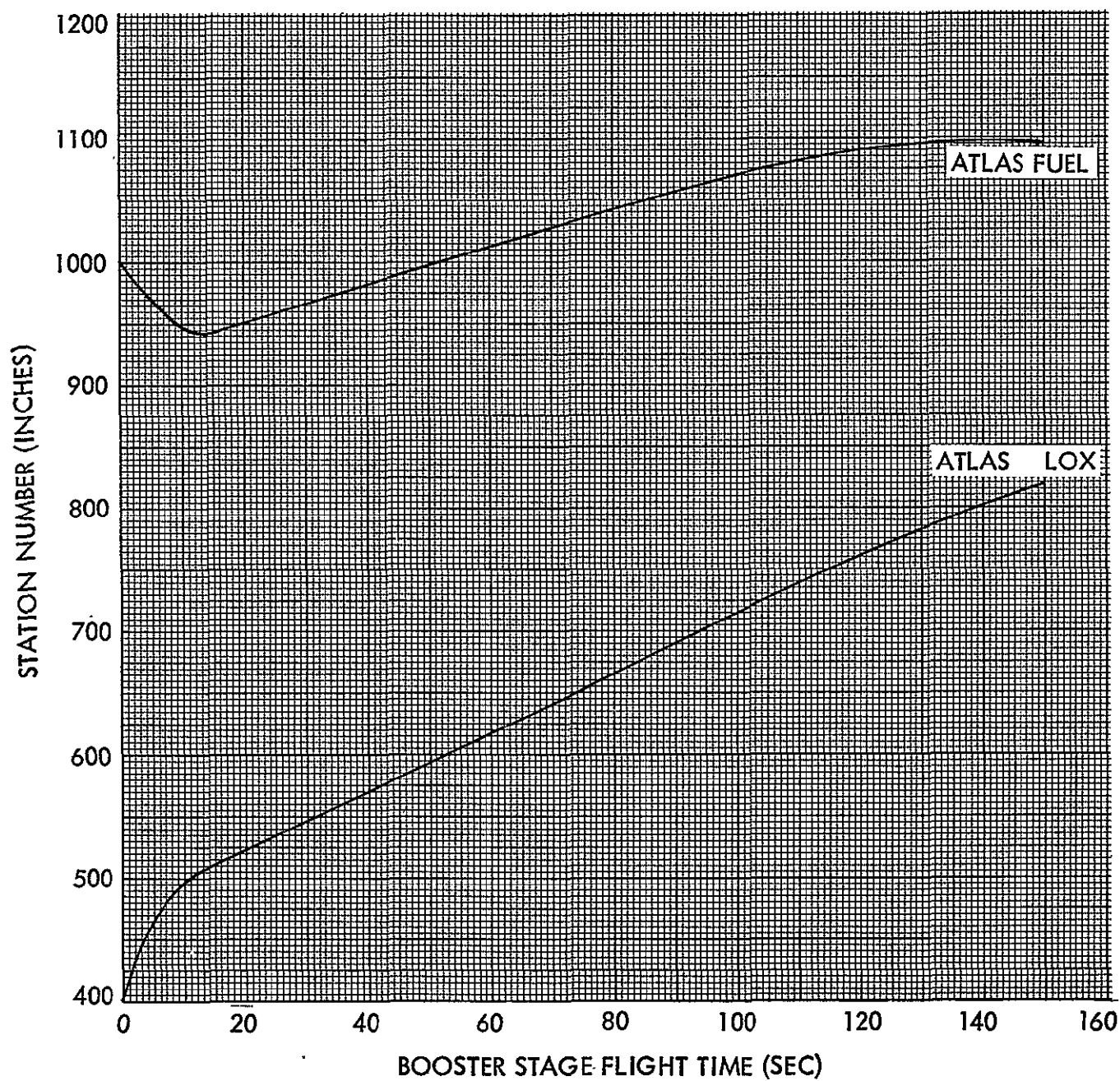
ATLAS SLV 3A/BURNER 2, SLOSH MASS VERSUS TIME

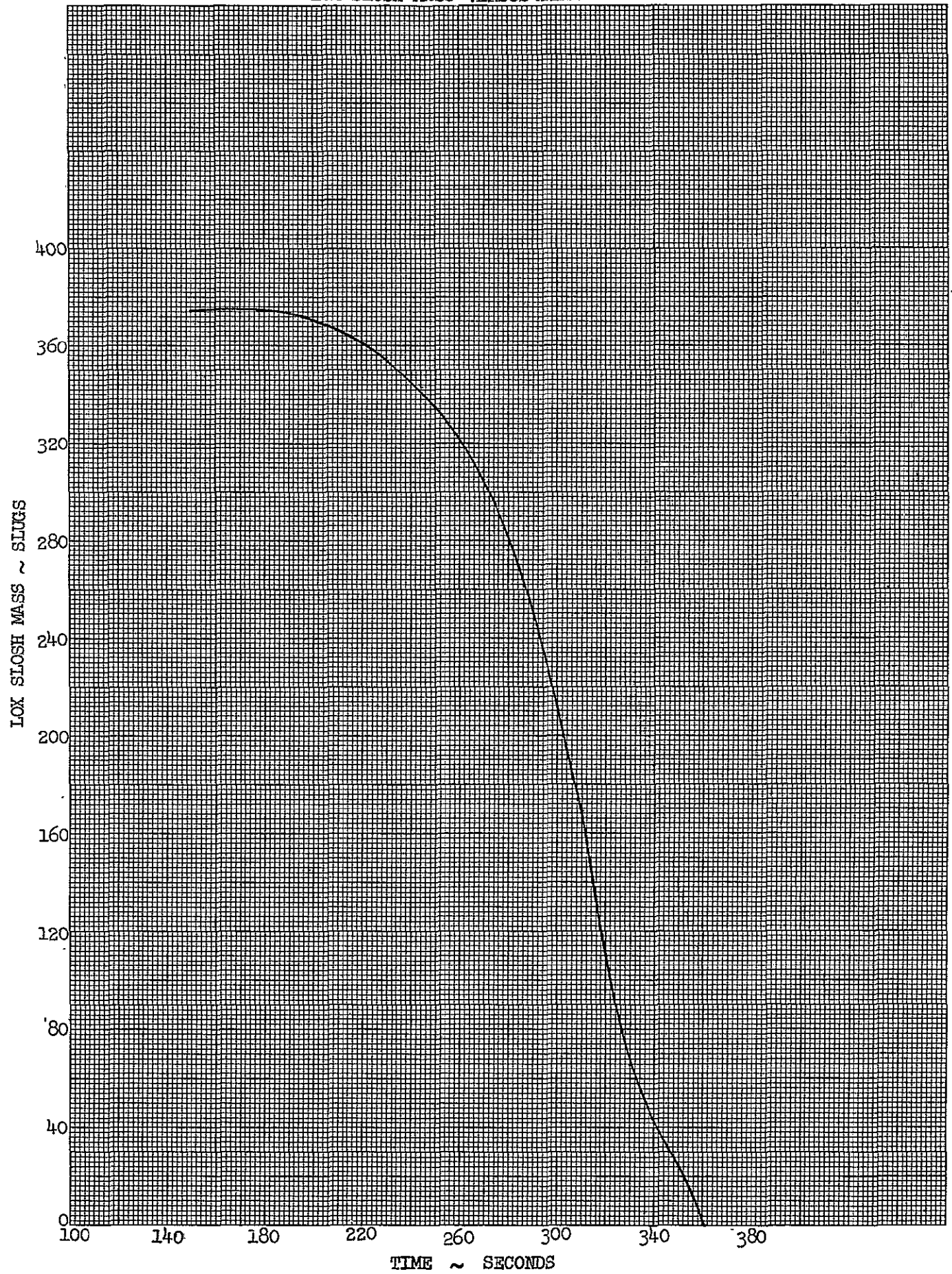


ATLAS SLV3A/BURNER 2, SLOSH FREQUENCY VERSUS TIME



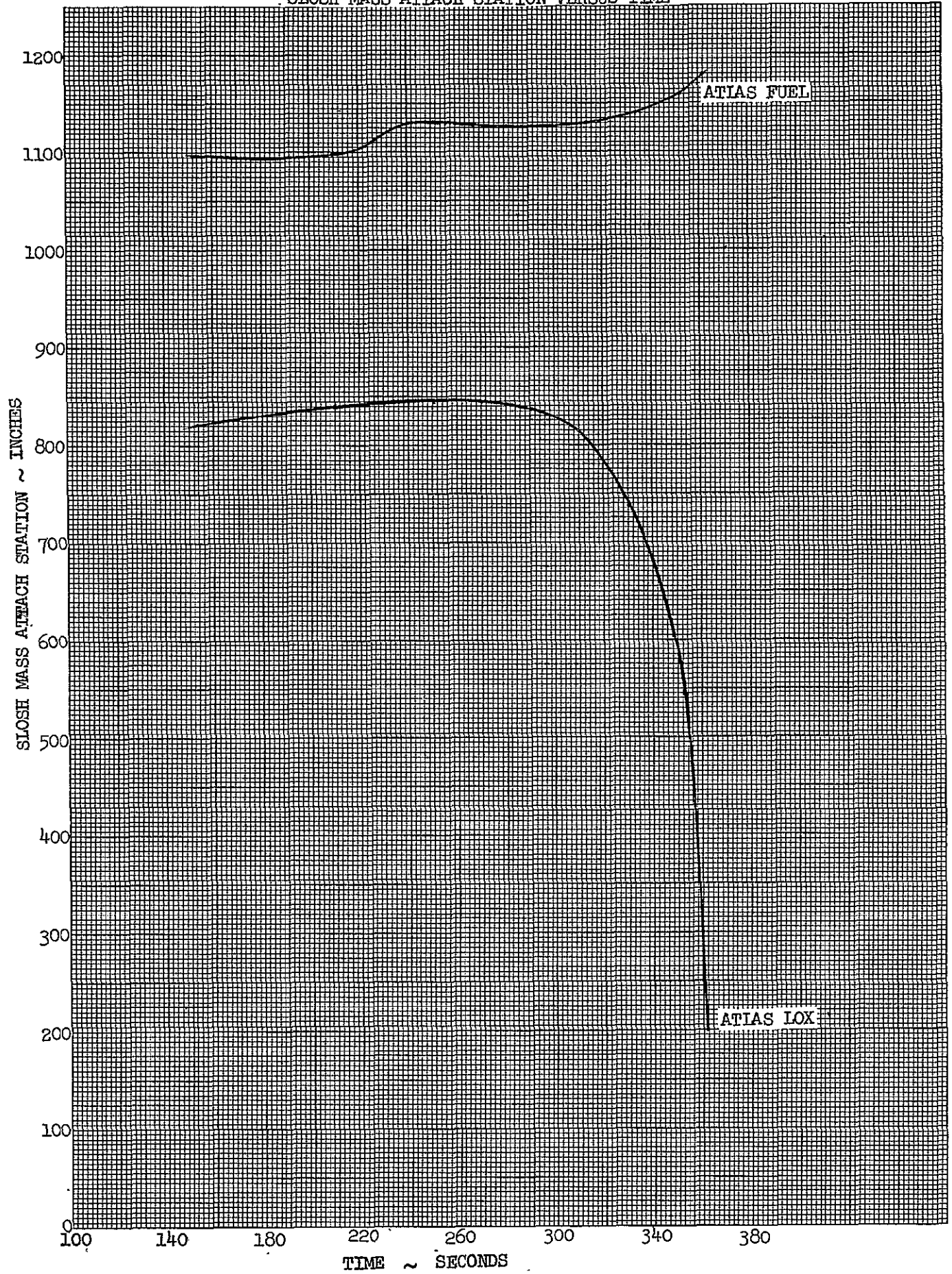
ATLAS SLV3A/BURNER 2, SLOSH MASS ATTACH STATION VERSUS TIME





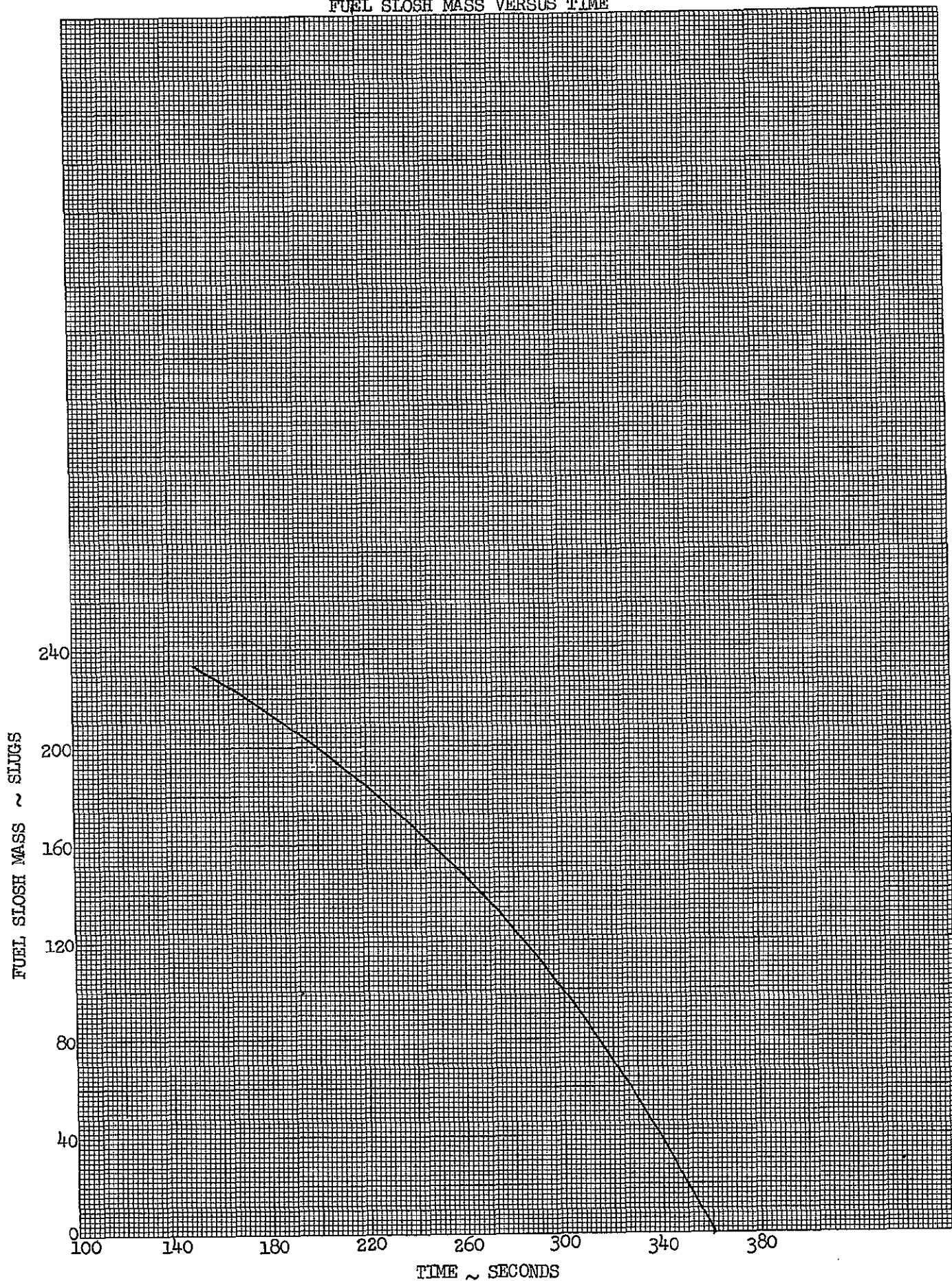
ATIAS SLV3A/BURNER 2, SUSTAINER PHASE
SLOSH MASS ATTACH STATION VERSUS TIME

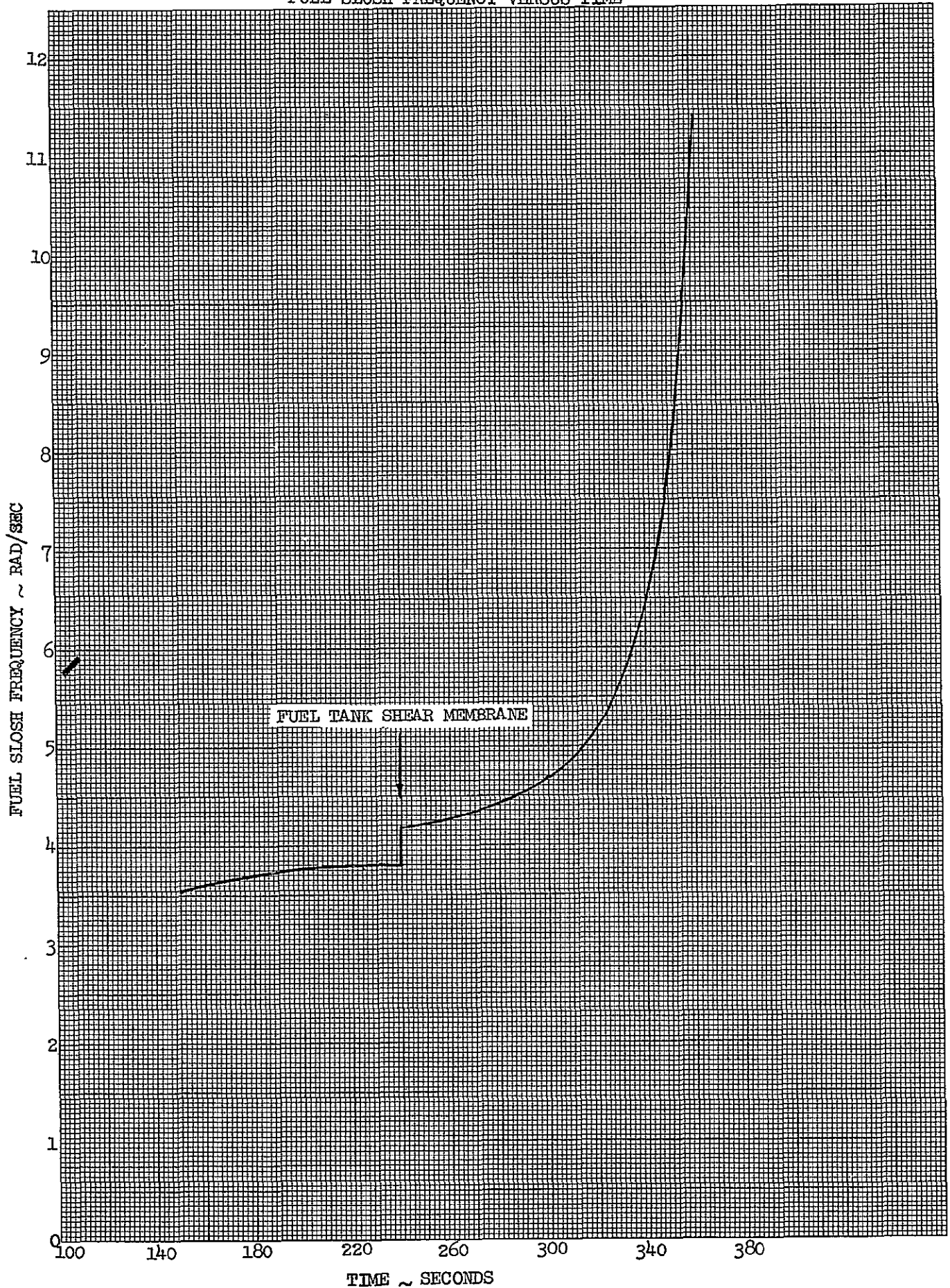
131



ATLAS SLV3A/BURNER 2, SUSTAINER PHASE
FUEL SLOSH MASS VERSUS TIME

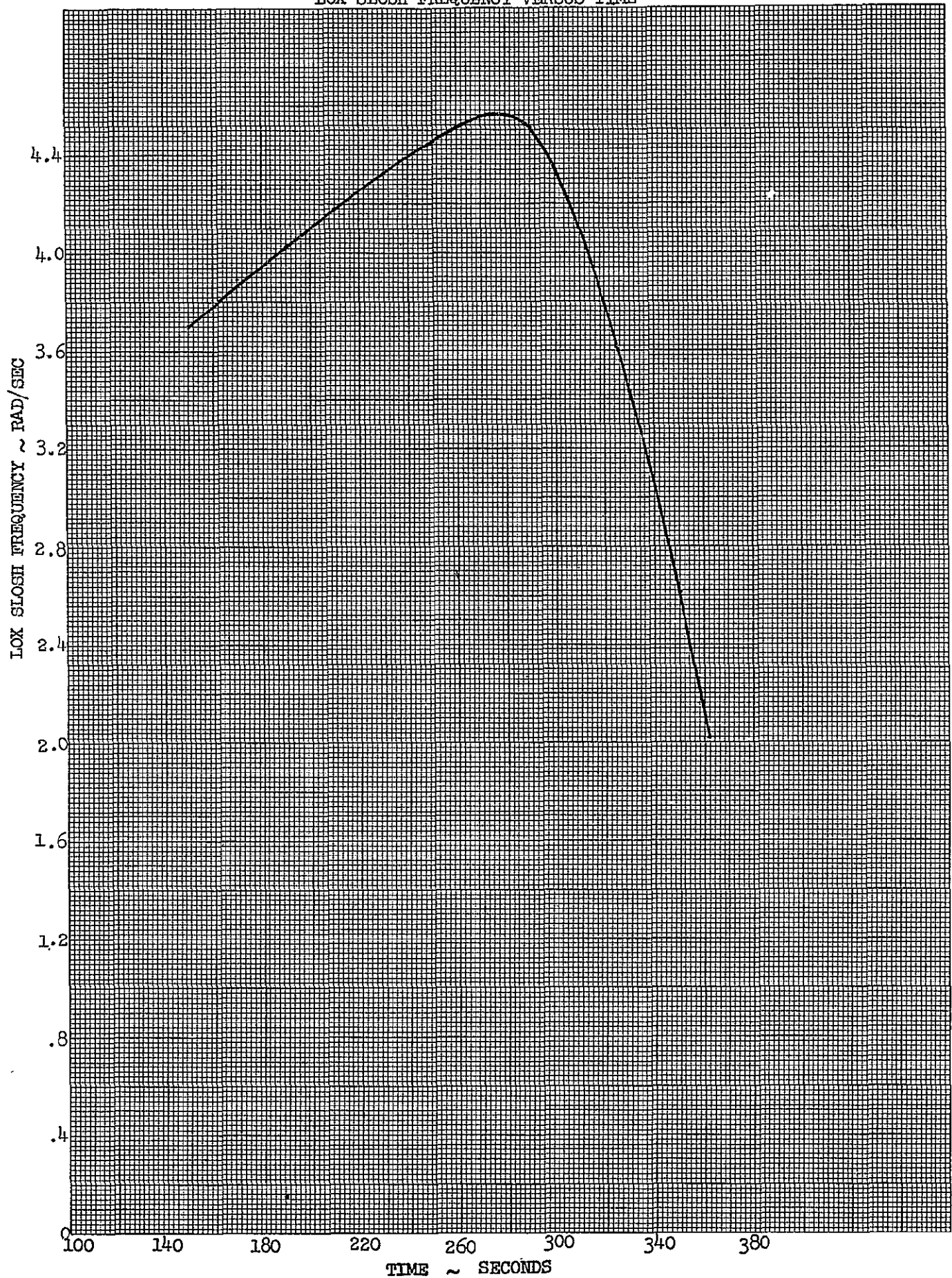
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ATLAS SLV3A/BURNER 2. SUSTAINER PHASE
LOX SLOSH FREQUENCY VERSUS TIME

134



Same As For
ATLAS SILV3C/CENTAUR

Atlas SLV3A/Burner 2

Bending Mode Data

<u>Parameter</u>	<u>Printout</u>
Bending Mode Frequency	OMEGA (rad/sec)
Bending Modal Mass	TOTAL MASS ($\frac{1}{12}$ Slugs)
Bending Mode Deflection	Y/Q EQ PHI (non dimensional)
Bending Mode Slope	PHI PR (inch ⁻¹)

Primary Stations

Engine Gimbal	1212 inches
Atlas Position Gyros	991
Atlas Rate Gyros	577
Guidance Sensors	375

NOTE: Beam 2 contains the booster engines. The sustainer engine and vehicle structure are represented by Beam 1.

t=0
Start Booster
Phase
Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.80811105E+01	3.26926558E+02	8.16403912E+02	7.94933489E+02	7.30477129E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-1.86533902E-02	9.34241383E+00 -1.86533902E-02
-3.70000E+01	1.20652761E+02	5.26981006E+03	5.23413171E+02	-1.86416399E-02	8.96798069E+00 -1.87831029E-02
-2.50000E+01	2.26899361E+02	1.33808488E+04	8.27122220E+02	-1.85875101E-02	8.73978597E+00 -1.90740526E-02
0.	4.39421610E+02	4.17237221E+04	1.43461741E+03	-1.82998936E-02	8.26246602E+00 -1.89830448E-02
2.50000E+01	6.40065799E+02	8.48286826E+04	2.00815388E+03	-1.79206618E-02	7.79104594E+00 -1.84944201E-02
5.00000E+01	8.29086549E+02	1.41854753E+05	2.54846284E+03	-1.76239298E-02	7.33203810E+00 -1.81902549E-02
7.50000E+01	1.00674265E+03	2.11981139E+05	3.05628806E+03	-1.73650255E-02	6.88167232E+00 -1.79012164E-02
1.00000E+02	1.17321648E+03	2.94402727E+05	3.53214257E+03	-1.70331826E-02	6.43700883E+00 -1.76528568E-02
1.25000E+02	1.32866520E+03	3.88325537E+05	3.97647737E+03	-1.65852373E-02	6.0004341E+00 -1.72828649E-02
1.50000E+02	1.47332102E+03	4.92969384E+05	4.38995564E+03	-1.60065714E-02	5.57400036E+00 -1.67767391E-02
1.75000E+02	1.60756379E+03	6.07575483E+05	4.77367646E+03	-1.56795041E-02	5.16632167E+00 -1.61568718E-02
2.00000E+02	1.73171335E+03	7.31412716E+05	5.12854312E+03	-1.52814358E-02	4.76677262E+00 -1.57942901E-02
2.25000E+02	1.84599663E+03	8.63767550E+05	5.45520417E+03	-1.48070849E-02	4.37726649E+00 -1.53526053E-02
2.50000E+02	1.95069811E+03	1.00394449E+06	5.75447346E+03	-1.43265356E-02	4.00166663E+00 -1.46143992E-02
2.75000E+02	2.04623506E+03	1.15127316E+06	6.02754642E+03	-1.39725262E-02	3.64276046E+00 -1.41323403E-02
3.00000E+02	2.13293223E+03	1.30511133E+06	6.27535557E+03	-1.36543074E-02	3.29414248E+00 -1.37674958E-02
3.25000E+02	2.21102192E+03	1.46483594E+06	6.49856201E+03	-1.33579834E-02	2.95402727E+00 -1.34468012E-02
3.50000E+02	2.28077583E+03	1.62983922E+06	6.69774153E+03	-1.30760039E-02	2.62160853E+00 -1.31496921E-02
3.75000E+02	2.34214904E+03	2.70719850E+06	1.78179496E+04	-1.26884172E-02	2.29510588E+00 -1.28524584E-02
3.85000E+02	2.36446140E+03	2.88538754E+06	1.78198393E+04	-1.25256944E-02	2.16744421E+00 -1.26798452E-02
4.00000E+02	2.39555895E+03	3.15656992E+06	1.85357144E+04	-1.22944861E-02	1.97906378E+00 -1.24432479E-02
4.25000E+02	2.44118375E+03	3.65822055E+06	2.20085982E+04	-1.18966514E-02	1.67207716E+00 -1.21515280E-02
4.50000E+02	2.47923600E+03	4.27343191E+06	2.74548156E+04	-1.14126917E-02	1.37314107E+00 -1.18004716E-02
4.75000E+02	2.50993613E+03	5.03929221E+06	3.39035138E+04	-1.08864745E-02	1.08448094E+00 -1.13063323E-02
5.00000E+02	2.53356623E+03	5.96937952E+06	4.04465298E+04	-1.04302991E-02	8.07409600E-01 -1.08747665E-02
5.25000E+02	2.55040142E+03	7.05526649E+06	4.62289242E+04	-1.00279256E-02	5.40883180E-01 -1.03600733E-02
5.50000E+02	2.56068781E+03	8.26637545E+06	5.02496832E+04	-9.52803465E-03	2.81580755E-01 -1.02357767E-02
5.75000E+02	2.56460674E+03	9.54687692E+06	5.17853642E+04	-8.81001605E-03	3.41046499E-02 -9.53938738E-03
5.77000E+02	2.56465594E+03	9.65046945E+06	5.18046777E+04	-8.74808915E-03	1.50873836E-02 -9.47773249E-03
6.00000E+02	2.56257067E+03	1.08361420E+07	5.09820669E+04	-7.98798476E-03	-1.94245740E-01 -8.70604204E-03

6.25000E+02	2.55510384E+03	1.20781830E+07	4.80442743E+04	-7.06352604E-03	-4.00091918E-01	-7.74020596E-03
6.50000E+02	2.54280745E+03	1.32225332E+07	4.32088962E+04	-6.04252301E-03	-5.80227476E-01	-6.65109901E-03
6.75000E+02	2.52636131E+03	1.42250320E+07	3.67430172E+04	-4.93467950E-03	-7.31730699E-01	-5.45218678E-03
7.00000E+02	2.50651362E+03	1.50485393E+07	2.89406023E+04	-3.75298212E-03	-8.52063568E-01	-4.16059624E-03
7.25000E+02	2.48407031E+03	1.56635576E+07	2.01183060E+04	-2.51310830E-03	-9.39155290E-01	-2.79646472E-03
7.50000E+02	2.45988249E+03	1.60487386E+07	1.06105436E+04	-1.23278868E-03	-9.91468819E-01	-1.38223296E-03
7.75000E+02	2.43482661E+03	1.61912594E+07	7.63894215E+02	2.70976408E-05	-1.00817628E+00	1.73041252E-05
8.00000E+02	2.40977346E+03	1.60869559E+07	-9.08127977E+03	1.16462515E-03	-9.91795359E-01	1.26900767E-03
8.25000E+02	2.38551016E+03	1.57397807E+07	-1.86172997E+04	2.19925118E-03	-9.45709401E-01	2.41324313E-03
8.50000E+02	2.36274257E+03	1.51610088E+07	-2.75641262E+04	3.16017592E-03	-8.72186403E-01	3.46307840E-03
8.75000E+02	2.34212619E+03	1.43686351E+07	-3.56651645E+04	4.01781215E-03	-7.74042770E-01	4.37806634E-03
9.00000E+02	2.32423293E+03	1.33868558E+07	-4.24943655E+04	4.77038869E-03	-6.54483795E-01	5.16753230E-03
9.25000E+02	2.30956181E+03	1.22655177E+07	-4.69801386E+04	5.41371976E-03	-5.16856343E-01	5.79259185E-03
9.50000E+02	2.29851752E+03	1.10489545E+07	-5.01626441E+04	5.94389560E-03	-3.64959926E-01	6.34843305E-03
9.75000E+02	2.29143669E+03	9.76690239E+06	-5.22035576E+04	6.41717660E-03	-1.99985958E-01	6.83817304E-03
9.91000E+02	2.28912784E+03	8.92563250E+06	-5.28694375E+04	6.68909383E-03	-8.83187362E-02	7.11546026E-03
1.00000E+03	2.28862409E+03	8.44902778E+06	-5.30147818E+04	6.83125192E-03	-2.36277461E-02	7.25879048E-03
1.02500E+03	2.29034431E+03	7.12704519E+06	-5.25206390E+04	7.18475049E-03	1.62350891E-01	7.59506799E-03
1.05000E+03	2.29680997E+03	5.83438924E+06	-5.06597804E+04	7.46882248E-03	3.55737576E-01	7.86460202E-03
1.07500E+03	2.30818414E+03	4.60584409E+06	-4.73850481E+04	7.69412429E-03	5.54746387E-01	8.04774405E-03
1.10000E+03	2.32458473E+03	3.47720286E+06	-4.26627404E+04	7.86388361E-03	7.57674701E-01	8.17529047E-03
1.12500E+03	2.34607873E+03	2.48523230E+06	-3.63537761E+04	7.96296547E-03	9.62062061E-01	8.20299640E-03
1.13300E+03	2.35403787E+03	2.20426909E+06	-3.38595934E+04	7.98553055E-03	1.02772249E+00	8.21126117E-03
1.16000E+03	2.38478554E+03	1.42015060E+06	-2.47628037E+04	8.04193655E-03	1.25006557E+00	8.25726528E-03
1.19000E+03	2.42600396E+03	7.24760629E+05	-1.95326614E+04	8.07788351E-03	1.49760109E+00	8.22664219E-03
1.20600E+03	2.45101738E+03	4.37798139E+05	-1.65785557E+04	8.08821430E-03	1.62905491E+00	8.20663256E-03
1.21200E+03	2.46093856E+03	3.86190745E+05	-8.47456845E+03	8.09559105E-03	1.67800689E+00	8.16712415E-03
1.22500E+03	2.48344472E+03	2.79700198E+05	-7.90273253E+03	8.10861802E-03	1.78447840E+00	8.21864787E-03
1.24200E+03	2.51497983E+03	1.52077357E+05	-7.10154111E+03	8.11965485E-03	1.92613027E+00	8.51418491E-03
1.25000E+03	2.53066102E+03	9.68495802E+04	-6.70309816E+03	8.12266555E-03	1.99416865E+00	8.49505989E-03
1.26418E+03	2.55979060E+03	6.99622347E+03	-5.96293676E+03	8.12486261E-03	2.11436004E+00	8.45613687E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			2.48568090E+00		
1.26418E+03	2.55979060E+03	6.99622347E+03	-8.75841022E+02	8.12486261E-03	2.11436004E+00	8.17352044E-03
1.27500E+03	2.58314547E+03	7.08186816E+02	-2.82413705E+02	8.12497180E-03	2.20262117E+00	8.14066145E-03
1.28000E+03	2.59426024E+03	2.96674878E-14	1.55185002E-15	8.12497540E-03	2.24328538E+00	8.12497540E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.80811105E+01	3.26926558E+02	8.07512953E+00	2.95455521E+01	2.91327444E+01	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	9.97363153E-03	1.22581284E+00 9.97363153E-03
1.16200E+03	2.46530348E+00	7.02410942E+03	3.51460960E+03	9.97363855E-03	1.24561963E+00 9.90334636E-03
1.16400E+03	4.97634941E+00	1.40554498E+04	3.51673636E+03	9.97365963E-03	1.26542630E+00 9.90332490E-03
1.16600E+03	7.52700864E+00	2.10910772E+04	3.51889666E+03	9.97369477E-03	1.28523294E+00 9.90331684E-03
1.16800E+03	1.01172812E+01	2.81310588E+04	3.52109052E+03	9.97374399E-03	1.30503957E+00 9.90332218E-03
1.17000E+03	1.27471670E+01	3.51754617E+04	3.52331793E+03	9.97380730E-03	1.32484623E+00 9.90334094E-03
1.18000E+03	2.64907999E+01	7.04661435E+04	3.53495823E+03	9.97433541E-03	1.42388084E+00 9.90363625E-03
1.19000E+03	4.12247993E+01	1.05877422E+05	3.54743734E+03	9.97521702E-03	1.52292008E+00 9.90426828E-03
1.20000E+03	5.69492283E+01	1.41417687E+05	3.56075530E+03	9.97645339E-03	1.62196733E+00 9.90523828E-03
1.20600E+03	6.68593309E+01	1.62807248E+05	3.56914877E+03	9.97736604E-03	1.68140094E+00 9.90598306E-03
1.21000E+03	7.36654226E+01	1.46114416E+05	-4.17018074E+03	9.97777793E-03	1.72164509E+00 1.00611815E-02
1.21200E+03	7.71288353E+01	1.37776982E+05	-4.16724737E+03	9.97796719E-03	1.74176759E+00 1.00613121E-02
1.22000E+03	9.13849428E+01	1.04486937E+05	-4.15517302E+03	9.97861318E-03	1.82225983E+00 1.00617166E-02
1.23000E+03	1.10110632E+02	6.30137965E+04	-4.13931311E+03	9.97917143E-03	1.92287845E+00 1.00619577E-02
1.24000E+03	1.29842515E+02	2.17035158E+04	-4.12260099E+03	9.97945373E-03	2.02349801E+00 1.00619057E-02
1.24200E+03	1.33909635E+02	-1.19077011E-13	-1.37540407E-10	9.97947266E-03	2.04362054E+00 9.97947266E-03

t0,1

t=0
Start Booster
Phase
Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
3.65629874E+01	1.33685205E+03	8.16403912E+02	8.04939714E+02	6.59964903E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	5.87715340E-02	-1.84720021E+01	5.87715340E-02
-3.70000E+01	-2.34113652E+02	-4.22626880E+04	-4.18004021E+03	5.86771033E-02	-1.72856236E+01	5.98068439E-02
-2.50000E+01	-4.37101997E+02	-1.06763844E+05	-6.55286274E+03	5.82442595E-02	-1.65457672E+01	6.20988846E-02
0.	-8.31258414E+02	-3.29125150E+05	-1.11601454E+04	5.59634583E-02	-1.49908400E+01	6.12778132E-02
2.50000E+01	-1.18701160E+03	-6.61027331E+05	-1.53183616E+04	5.29900112E-02	-1.34851773E+01	5.73666860E-02
5.00000E+01	-1.50641319E+03	-1.09150927E+06	-1.90516095E+04	5.06920716E-02	-1.20781786E+01	5.49257626E-02
7.50000E+01	-1.79151409E+03	-1.61026779E+06	-2.23839956E+04	4.87121988E-02	-1.07394647E+01	5.26392156E-02
1.00000E+02	-2.04376160E+03	-2.20750703E+06	-2.53321631E+04	4.62085860E-02	-9.44653861E+00	5.06528252E-02
1.25000E+02	-2.26440968E+03	-2.87379480E+06	-2.79108331E+04	4.28726924E-02	-8.21430335E+00	4.77693298E-02
1.50000E+02	-2.45526580E+03	-3.60014332E+06	-3.01411204E+04	3.86196355E-02	-7.06622837E+00	4.39075513E-02
1.75000E+02	-2.61915388E+03	-4.37823060E+06	-3.20564407E+04	3.62474944E-02	-6.05161554E+00	3.94531384E-02
2.00000E+02	-2.75841676E+03	-5.20056492E+06	-3.36838441E+04	3.33986802E-02	-5.09778508E+00	3.67670646E-02
2.25000E+02	-2.87473468E+03	-6.06018596E+06	-3.50429672E+04	3.00489514E-02	-4.21766150E+00	3.35532481E-02
2.50000E+02	-2.97016654E+03	-6.95067410E+06	-3.61579121E+04	2.66982359E-02	-3.43595672E+00	2.85070108E-02
2.75000E+02	-3.04757794E+03	-7.86633306E+06	-3.70622479E+04	2.42630583E-02	-2.76691514E+00	2.52457254E-02
3.00000E+02	-3.10916240E+03	-8.80224744E+06	-3.77817139E+04	2.21026701E-02	-2.16745810E+00	2.27841380E-02
3.25000E+02	-3.15648650E+03	-9.75403078E+06	-3.83345436E+04	2.01167644E-02	-1.62511964E+00	2.06406939E-02
3.50000E+02	-3.19089856E+03	-1.07177175E+07	-3.87364753E+04	1.82507907E-02	-1.13394345E+00	1.86769671E-02
3.75000E+02	-3.21363008E+03	-1.158129519E+07	-5.81315491E+04	1.58928108E-02	-6.92526996E-01	1.64279997E-02
3.85000E+02	-3.21975609E+03	-1.63942784E+07	-5.81336687E+04	1.49555954E-02	-5.33111010E-01	1.54584818E-02
4.00000E+02	-3.22608273E+03	-1.72695478E+07	-5.86897854E+04	1.36662659E-02	-3.11381581E-01	1.41372914E-02
4.25000E+02	-3.22967294E+03	-1.87518291E+07	-5.96267622E+04	1.15577158E-02	1.72427112E-02	1.22482400E-02
4.50000E+02	-3.22568626E+03	-2.02217314E+07	-5.71036013E+04	9.17307345E-03	2.94461590E-01	9.97962149E-03
4.75000E+02	-3.21552210E+03	-2.15531117E+07	-4.81655538E+04	6.79699370E-03	5.10410163E-01	7.39347114E-03
5.00000E+02	-3.20070408E+03	-2.25626199E+07	-3.11708382E+04	4.95534372E-03	6.68026709E-01	5.29788040E-03
5.25000E+02	-3.18255325E+03	-2.30385222E+07	-5.42321544E+03	3.53518705E-03	7.78160227E-01	3.57415202E-03
5.50000E+02	-3.16215429E+03	-2.27725095E+07	2.72636885E+04	2.05304497E-03	8.47053113E-01	1.66904935E-03
5.75000E+02	-3.14072644E+03	-2.16612002E+07	6.17279936E+04	2.55568889E-04	8.60071825E-01	-6.13839472E-04
5.77000E+02	-3.13900770E+03	-2.15349828E+07	6.44886004E+04	1.16223394E-04	8.58665773E-01	-7.92066752E-04
6.00000E+02	-3.11966877E+03	-1.96911910E+07	9.55872480E+04	-1.41755905E-03	8.17469255E-01	-2.76385832E-03

6.25000E+02	-3.10032827E+03	-1.69048662E+07	1.26691421E+05	-2.89843550E-03	7.23806996E-01	-4.68282171E-03
6.50000E+02	-3.08389361E+03	-1.33956662E+07	1.53121718E+05	-4.12467429E-03	5.86002933E-01	-6.28131821E-03
6.75000E+02	-3.07135889E+03	-9.30116879E+06	1.73279863E+05	-5.04325789E-03	4.13046574E-01	-7.48381934E-03
7.00000E+02	-3.06347192E+03	-4.79409846E+06	1.85963566E+05	-5.61374750E-03	2.15596560E-01	-8.23295266E-03
7.25000E+02	-3.06069852E+03	-7.16686842E+04	1.90423848E+05	-5.81069737E-03	5.48412257E-03	-8.49272340E-03
7.50000E+02	-3.06320024E+03	4.65624738E+06	1.86401002E+05	-5.62515879E-03	-2.04849144E-01	-8.25052502E-03
7.75000E+02	-3.07082444E+03	9.17957821E+06	1.74145709E+05	-5.08730433E-03	-4.31463452E-01	-7.31994162E-03
8.00000E+02	-3.08303709E+03	1.33020887E+07	1.54515187E+05	-4.29496092E-03	-5.71236996E-01	-6.07099755E-03
8.25000E+02	-3.09907291E+03	1.68541036E+07	1.28732717E+05	-3.31237401E-03	-7.07637138E-01	-4.79206041E-03
8.50000E+02	-3.11808169E+03	1.96988766E+07	9.81782358E+04	-2.17370482E-03	-8.07960756E-01	-3.25258653E-03
8.75000E+02	-3.13910612E+03	2.17359820E+07	6.43874809E+04	-9.69023856E-04	-8.68341678E-01	-1.61940245E-03
9.00000E+02	-3.16114400E+03	2.29058999E+07	3.00840985E+04	2.42758465E-04	-8.88611815E-01	-3.84013343E-05
9.25000E+02	-3.18321301E+03	2.33076345E+07	2.53122729E+03	1.40182311E-03	-8.71288907E-01	1.38140998E-03
9.50000E+02	-3.20441534E+03	2.30555031E+07	-2.24548862E+04	2.45789777E-03	-8.20985161E-01	2.63898556E-03
9.75000E+02	-3.22397098E+03	2.22010630E+07	-4.55013306E+04	3.48863937E-03	-7.39681825E-01	3.85558558E-03
9.91000E+02	-3.23527102E+03	2.13648043E+07	-5.88185551E+04	4.12284104E-03	-6.72013538E-01	4.59718423E-03
1.00000E+03	-3.24112480E+03	2.08040611E+07	-6.57147856E+04	4.46794363E-03	-6.28826006E-01	4.99790157E-03
1.02500E+03	-3.25515988E+03	1.89459455E+07	-8.22563817E+04	5.37170878E-03	-4.90675602E-01	6.01433677E-03
1.05000E+03	-3.26544068E+03	1.67281251E+07	-9.43761277E+04	6.15514290E-03	-3.29060468E-01	6.89245640E-03
1.07500E+03	-3.27142896E+03	1.42693445E+07	-1.01437117E+05	6.82542109E-03	-1.47843640E-01	7.58241450E-03
1.10000E+03	-3.27268666E+03	1.17027288E+07	-1.02926752E+05	7.37215788E-03	4.88599915E-02	8.12344805E-03
1.12500E+03	-3.26891184E+03	9.17276575E+06	-9.83645591E+04	7.71985533E-03	2.54255392E-01	8.36932120E-03
1.13300E+03	-3.26660880E+03	8.39719263E+06	-9.54138367E+04	7.80442993E-03	3.21505512E-01	8.44052218E-03
1.16000E+03	-3.25481104E+03	6.00946485E+06	-8.13758339E+04	8.03004344E-03	5.53516551E-01	8.73765939E-03
1.19000E+03	-3.23423864E+03	3.47499145E+06	-7.68660376E+04	8.19063347E-03	8.17706843E-01	8.77603707E-03
1.20600E+03	-3.22003398E+03	2.30361965E+06	-7.00301967E+04	8.24216634E-03	9.57840435E-01	8.74238203E-03
1.21200E+03	-3.21413231E+03	2.04950974E+06	-4.20423951E+04	8.28114409E-03	1.00938308E+00	8.63602032E-03
1.22500E+03	-3.20027004E+03	1.51215141E+06	-4.06025098E+04	8.35089063E-03	1.12327337E+00	8.91619994E-03
1.24200E+03	-3.17982371E+03	8.39549107E+05	-3.84798710E+04	8.41116685E-03	1.28545196E+00	1.05489375E-02
1.25000E+03	-3.16920322E+03	5.36077468E+05	-3.73763722E+04	8.42782241E-03	1.36967234E+00	1.05042875E-02
1.26418E+03	-3.14872996E+03	2.09052828E+04	-3.52490384E+04	8.43969990E-03	1.51790992E+00	1.03979798E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =					3.90061368E+00
1.26418E+03	-3.14872996E+03	2.09052828E+04	-2.60599680E+03	8.43969990E-03	1.51790992E+00	8.58447750E-03
1.27500E+03	-3.13180649E+03	2.12801662E+03	-8.47542612E+02	8.44002680E-03	1.61027297E+00	8.48711250E-03
1.28000E+03	-3.12364933E+03	-4.11566704E-07	-1.20902251E-10	8.44003763E-03	1.65259137E+00	8.44003763E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.65629874E+01	1.33685205E+03	8.07512953E+00	1.95393274E+01	1.85838706E+01	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	1.51607459E-02	4.54551749E-01	1.51607459E-02
1.16200E+03	9.36640817E-01	2.55766570E+04	1.27922548E+04	1.51607715E-02	4.84361725E-01	1.49049264E-02
1.16400E+03	1.93517412E+00	5.11645903E+04	1.27957130E+04	1.51608482E-02	5.14171577E-01	1.49049340E-02
1.16600E+03	2.99332717E+00	7.67596467E+04	1.27993778E+04	1.51609762E-02	5.43981492E-01	1.49049886E-02
1.16800E+03	4.11110019E+00	1.02362239E+05	1.28032490E+04	1.51611553E-02	5.73791563E-01	1.49050903E-02
1.17000E+03	5.28849360E+00	1.27972780E+05	1.28073267E+04	1.51613856E-02	6.03601884E-01	1.49052391E-02
1.18000E+03	1.20697937E+01	2.56159176E+05	1.28308127E+04	1.51633061E-02	7.52660547E-01	1.49066898E-02
1.19000E+03	2.03417728E+01	3.84606244E+05	1.28594615E+04	1.51665097E-02	9.01739613E-01	1.49093204E-02
1.20000E+03	3.01046938E+01	5.13365618E+05	1.28932739E+04	1.51709992E-02	1.05085090E+00	1.49131338E-02
1.20600E+03	3.66782522E+01	5.90792631E+05	1.29160404E+04	1.51743116E-02	1.14033806E+00	1.49159908E-02
1.21000E+03	4.13632683E+01	5.34173800E+05	-1.41461531E+04	1.51758116E-02	1.20217073E+00	1.54587346E-02
1.21200E+03	4.37985276E+01	5.05889892E+05	-1.41377190E+04	1.51765050E-02	1.23308873E+00	1.54592593E-02
1.22000E+03	5.41579536E+01	3.92929369E+05	-1.41018407E+04	1.51789017E-02	1.35676997E+00	1.54609385E-02
1.23000E+03	6.84987239E+01	2.52154835E+05	-1.40521736E+04	1.51810517E-02	1.51138601E+00	1.54620952E-02
1.24000E+03	8.43856950E+01	1.11903747E+05	-1.39971515E+04	1.51822649E-02	1.66600839E+00	1.54622079E-02
1.24200E+03	8.77486361E+01	-2.10800609E-07	-4.29665609E-08	1.51823674E-02	1.69692851E+00	1.51823674E-02

t012

t=0
Start Booster
Phase
Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION		
4.71521216E+01	2.22332257E+03	8.16403912E+02	8.20673592E+02	2.29146908E+02	0.			
STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.			4.09166381E-02	-1.04015800E+01	4.09166381E-02
-3.70000E+01	-1.30232816E+02	-3.93732075E+04	-3.88362636E+03			4.08285456E-02	-9.57304908E+00	4.18781743E-02
-2.50000E+01	-2.41971176E+02	-9.91328219E+04	-6.05598446E+03			4.04260599E-02	-9.05001089E+00	4.39884037E-02
0.	-4.54406444E+02	-3.03272615E+05	-1.01857493E+04			3.83169126E-02	-7.94881436E+00	4.31672694E-02
2.50000E+01	-6.39767723E+02	-6.04029632E+05	-1.37889264E+04			3.55882885E-02	-6.89471782E+00	3.95279818E-02
5.00000E+01	-7.99972365E+02	-9.88654212E+05	-1.69029748E+04			3.34975283E-02	-5.93199389E+00	3.72537449E-02
7.50000E+01	-9.36915530E+02	-1.44541194E+06	-1.95649469E+04			3.17119716E-02	-5.03223100E+00	3.51444185E-02
1.00000E+02	-1.05193521E+03	-1.96334711E+06	-2.18004245E+04			2.94754943E-02	-4.17510180E+00	3.33001301E-02
1.25000E+02	-1.14619371E+03	-2.53206532E+06	-2.36321099E+04			2.65230062E-02	-3.37378616E+00	3.06689904E-02
1.50000E+02	-1.22133905E+03	-3.14185142E+06	-2.50920263E+04			2.27941670E-02	-2.64866968E+00	2.71962768E-02
1.75000E+02	-1.27986602E+03	-3.78398451E+06	-2.62292752E+04			2.07343162E-02	-2.03955395E+00	2.33572437E-02
2.00000E+02	-1.32382203E+03	-4.45095228E+06	-2.70831622E+04			1.82845007E-02	-1.48429478E+00	2.09928169E-02
2.25000E+02	-1.35468550E+03	-5.13601916E+06	-2.76824245E+04			1.54319781E-02	-9.93482502E-01	1.82002205E-02
2.50000E+02	-1.37423903E+03	-5.83323533E+06	-2.80617818E+04			1.26051519E-02	-5.86530719E-01	1.40089233E-02
2.75000E+02	-1.38487118E+03	-6.53767245E+06	-2.82677680E+04			1.05711731E-02	-2.72255098E-01	1.13226638E-02
3.00000E+02	-1.38838771E+03	-7.24547460E+06	-2.83356049E+04			8.78417464E-03	-1.53335095E-02	9.29526326E-03
3.25000E+02	-1.38607721E+03	-7.95351027E+06	-2.82902381E+04			7.15712387E-03	1.94740241E-01	7.54377493E-03
3.50000E+02	-1.37904151E+03	-8.65922196E+06	-2.81530567E+04			5.64254638E-03	3.63174135E-01	5.95228464E-03
3.75000E+02	-1.36833458E+03	-1.09735011E+07	-1.74050678E+04			3.95292396E-03	4.87540251E-01	4.11316395E-03
3.85000E+02	-1.36326849E+03	-1.11475374E+07	-1.74021475E+04			3.30915729E-03	5.25384506E-01	3.45969489E-03
4.00000E+02	-1.35504481E+03	-1.14016065E+07	-1.60801408E+04			2.44494921E-03	5.70474705E-01	2.57400331E-03
4.25000E+02	-1.34013748E+03	-1.17207501E+07	-8.21559691E+03			1.08860813E-03	6.17263474E-01	1.18375112E-03
4.50000E+02	-1.32451817E+03	-1.17496688E+07	7.12951702E+03			-3.50540652E-04	6.26859654E-01	-4.51240045E-04
4.75000E+02	-1.30918486E+03	-1.13080565E+07	2.91729204E+04			-1.66978581E-03	5.94842760E-01	-2.03106037E-03
5.00000E+02	-1.29509147E+03	-1.02523480E+07	5.58337934E+04			-2.57651257E-03	5.28824901E-01	-3.19007074E-03
5.25000E+02	-1.28296330E+03	-8.50136716E+06	8.42840731E+04			-3.16605449E-03	4.38889609E-01	-3.77162262E-03
5.50000E+02	-1.27331511E+03	-6.05844544E+06	1.09977448E+05			-3.62787421E-03	3.26374024E-01	-5.17685235E-03
5.75000E+02	-1.26685544E+03	-3.07385316E+06	1.27254333E+05			-3.99901622E-03	1.88499534E-01	-5.79133077E-03
5.77000E+02	-1.26649005E+03	-2.81835812E+06	1.28230358E+05			-4.01802440E-03	1.76883697E-01	-5.82408578E-03
6.00000E+02	-1.26398923E+03	2.23958829E+05	1.34917313E+05			-4.11521925E-03	4.00689855E-02	-6.01546310E-03

6.25000E+02	-1.26485632E+03	3.58859471E+06	1.32595074E+05	-3.96109623E-03	-1.08839911E-01	-5.82863249E-03
6.50000E+02	-1.26933996E+03	6.77288577E+06	1.20598274E+05	-3.54127703E-03	-2.48004126E-01	-5.23984427E-03
6.75000E+02	-1.27707463E+03	9.54584774E+06	9.99045970E+04	-2.87978385E-03	-3.67789399E-01	-4.28689085E-03
7.00000E+02	-1.28746889E+03	1.17086705E+07	7.20960652E+04	-2.01807091E-03	-4.59838491E-01	-3.03350845E-03
7.25000E+02	-1.29974493E+03	1.31085873E+07	3.92532836E+04	-1.01185278E-03	-5.17665011E-01	-1.56471593E-03
7.50000E+02	-1.31299133E+03	1.36496394E+07	3.81436470E+03	7.30666438E-05	-5.37111217E-01	1.93431973E-05
7.75000E+02	-1.32623232E+03	1.32995708E+07	-3.15941122E+04	1.13110490E-03	-5.16995207E-01	1.53615762E-03
8.00000E+02	-1.33852251E+03	1.20912346E+07	-6.44579378E+04	2.03012074E-03	-4.62003968E-01	2.77101657E-03
8.25000E+02	-1.34907847E+03	1.01153380E+07	-9.26917349E+04	2.75493515E-03	-3.79211807E-01	3.82035738E-03
8.50000E+02	-1.35727880E+03	7.50937651E+06	-1.14617716E+05	3.30556766E-03	-2.74298155E-01	4.56510300E-03
8.75000E+02	-1.36266387E+03	4.44744200E+06	-1.29014207E+05	3.65539404E-03	-1.55292180E-01	4.95856785E-03
9.00000E+02	-1.36497883E+03	1.12710673E+06	-1.35127984E+05	3.80858825E-03	-2.96604940E-02	5.07146661E-03
9.25000E+02	-1.36414128E+03	-2.24273133E+06	-1.33434710E+05	3.78327713E-03	9.55182403E-02	4.85936350E-03
9.50000E+02	-1.36025753E+03	-5.49558593E+06	-1.25822929E+05	3.60668513E-03	2.14433640E-01	4.62138617E-03
9.75000E+02	-1.35349772E+03	-8.48683015E+06	-1.12573886E+05	3.28764774E-03	3.25019126E-01	4.19550166E-03
9.91000E+02	-1.34777964E+03	-1.02010431E+07	-1.01367013E+05	3.01538957E-03	3.89334181E-01	3.83286548E-03
1.00000E+03	-1.34412503E+03	-1.10815679E+07	-9.42068877E+04	2.84117128E-03	4.22800511E-01	3.60090425E-03
1.02500E+03	-1.33251187E+03	-1.31605145E+07	-7.14470073E+04	2.28889590E-03	5.03860839E-01	2.84707564E-03
1.05000E+03	-1.31911916E+03	-1.46248178E+07	-4.51981295E+04	1.67716901E-03	5.65010383E-01	2.03027940E-03
1.07500E+03	-1.30446091E+03	-1.53997536E+07	-1.64726760E+04	1.02638760E-03	6.04745621E-01	1.14931802E-03
1.10000E+03	-1.28908634E+03	-1.54367354E+07	1.36587493E+04	3.75308195E-04	6.22490363E-01	2.75609295E-04
1.12500E+03	-1.27351701E+03	-1.47124366E+07	4.46994871E+04	-1.28161488E-04	6.20641944E-01	-4.23296157E-04
1.13300E+03	-1.26856885E+03	-1.43126015E+07	5.52472432E+04	-2.67943173E-04	6.16397571E-01	-6.36258128E-04
1.16000E+03	-1.25226778E+03	-1.23259227E+07	8.84404939E+04	-6.88886006E-04	5.88099162E-01	-1.45793378E-03
1.19000E+03	-1.23534275E+03	-9.46551409E+06	1.05226175E+05	-1.06288240E-03	5.38358328E-01	-1.86427380E-03
1.20600E+03	-1.22697681E+03	-7.72208512E+06	1.11993058E+05	-1.21677596E-03	5.07224717E-01	-2.01672638E-03
1.21200E+03	-1.22397483E+03	-6.93705234E+06	1.31097053E+05	-1.34805647E-03	4.93434261E-01	-2.45463537E-03
1.22500E+03	-1.21780408E+03	-5.22575421E+06	1.32165707E+05	-1.58649077E-03	4.55912208E-01	-3.42663575E-03
1.24200E+03	-1.21076683E+03	-2.96813953E+06	1.33391880E+05	-1.79713670E-03	3.60463912E-01	-9.20779671E-03
1.25000E+03	-1.20817920E+03	-1.89914744E+06	1.33839093E+05	-1.85613827E-03	2.86445143E-01	-9.29164347E-03
1.26418E+03	-1.20505580E+03	2.90179686E+03	1.34378987E+05	-1.89696971E-03	1.54069572E-01	-9.36246898E-03
1.26418000E+03 TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =				-9.68238574E+00		
1.26418E+03	-1.20505580E+03	2.90179686E+03	-3.80450883E+02	-1.89696971E-03	1.54069572E-01	-1.87583355E-03
1.27500E+03	-1.20349901E+03	2.75136911E+02	-1.11418284E+02	-1.89692541E-03	1.33690604E-01	-1.89073551E-03
1.28000E+03	-1.20285423E+03	2.91602798E-05	-4.04188564E-06	-1.89692402E-03	1.24221267E-01	-1.89692402E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
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4.71521216E+01	2.22332257E+03	8.07512953E+00	3.80544992E+00	3.78421304E+00	0.
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STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	2.25004560E-03	5.35059516E-01	2.25004560E-03
1.16200E+03	1.07161801E+00	1.63018209E+04	8.15847725E+03	2.25006190E-03	5.39233582E-01	2.08689235E-03
1.16400E+03	2.15425890E+00	3.26250033E+04	8.16471316E+03	2.25011082E-03	5.43407286E-01	2.08681656E-03
1.16600E+03	3.24524707E+00	4.89607056E+04	8.17099714E+03	2.25019240E-03	5.47580869E-01	2.08677246E-03
1.16800E+03	4.34458234E+00	6.53090240E+04	8.17732921E+03	2.25030667E-03	5.51754397E-01	2.08676009E-03
1.17000E+03	5.45226466E+00	8.16700545E+04	8.18370935E+03	2.25045365E-03	5.55927931E-01	2.08677946E-03
1.18000E+03	1.11158892E+01	1.63669256E+05	8.21633128E+03	2.25168007E-03	5.76797932E-01	2.08735345E-03
1.19000E+03	1.69882558E+01	2.46000688E+05	8.25015554E+03	2.25372814E-03	5.97677658E-01	2.08872503E-03
1.20000E+03	2.30695016E+01	3.28676377E+05	8.28518292E+03	2.25660123E-03	6.18575103E-01	2.09089758E-03
1.20600E+03	2.68185982E+01	3.78452041E+05	8.30677736E+03	2.25872255E-03	6.31125411E-01	2.09258701E-03
1.21000E+03	2.93627725E+01	3.38457191E+05	-9.99102565E+03	2.25967842E-03	6.40962146E-01	2.45949893E-03
1.21200E+03	3.06496160E+01	3.18482543E+05	-9.98361355E+03	2.26011638E-03	6.45881438E-01	2.45978865E-03
1.22000E+03	3.58953914E+01	2.38733890E+05	-9.95339840E+03	2.26160218E-03	6.65563569E-01	2.46067015E-03
1.23000E+03	4.26740715E+01	1.39393948E+05	-9.91435386E+03	2.26286239E-03	6.90173242E-01	2.46114947E-03
1.24000E+03	4.96988607E+01	4.04515383E+04	-9.87389175E+03	2.26346165E-03	7.14784261E-01	2.46093948E-03
1.24200E+03	5.11333510E+01	3.88969968E-05	8.79570059E-07	2.26349547E-03	7.19703058E-01	2.26349547E-03

20,3

t=0
Start Booster
Phase
Mode 4

Atlas SLV3A/Burner 2

BEAM 1						
OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
5.82599537E+01	3.39422220E+03	8.16403912E+02	6.52900306E+02	5.90424728E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	7.54935269E-02	-1.59235745E+01	7.54935269E-02
-3.70000E+01	-1.96735499E+02	-9.15023814E+04	-8.99850681E+03	7.52885026E-02	-1.43900065E+01	7.77205314E-02
-2.50000E+01	-3.63536265E+02	-2.29538692E+05	-1.39494232E+04	7.43550787E-02	-1.34101210E+01	8.25606217E-02
0.	-6.72849222E+02	-6.96226659E+05	-2.31293247E+04	6.94936047E-02	-1.13447100E+01	8.05075688E-02
2.50000E+01	-9.31633132E+02	-1.37349158E+06	-3.08086591E+04	6.32587442E-02	-9.39186098E+00	7.20612183E-02
5.00000E+01	-1.14435917E+03	-2.22530594E+06	-3.71208053E+04	5.85281920E-02	-7.64993861E+00	6.67772598E-02
7.50000E+01	-1.31539082E+03	-3.21922759E+06	-4.21960193E+04	5.45294027E-02	-6.05259438E+00	6.19322131E-02
1.00000E+02	-1.44780867E+03	-4.32554707E+06	-4.61241945E+04	4.95765007E-02	-4.55414602E+00	5.76684647E-02
1.25000E+02	-1.54429492E+03	-5.51653583E+06	-4.89853452E+04	4.31092860E-02	-3.18336284E+00	5.17032062E-02
1.50000E+02	-1.60858274E+03	-6.76683542E+06	-5.08902330E+04	3.50333382E-02	-1.98380128E+00	4.39614492E-02
1.75000E+02	-1.64612191E+03	-8.05446656E+06	-5.20026260E+04	3.06236148E-02	-1.03272928E+00	3.58238774E-02
2.00000E+02	-1.66132599E+03	-9.36143550E+06	-5.24518415E+04	2.54408664E-02	-1.99605438E-01	3.06860506E-02
2.25000E+02	-1.65740594E+03	-1.06723215E+07	-5.23331735E+04	1.94782901E-02	4.94598377E-01	2.47116075E-02
2.50000E+02	-1.63815957E+03	-1.19742875E+07	-5.17596006E+04	1.36373955E-02	1.01354461E+00	1.62266342E-02
2.75000E+02	-1.60844454E+03	-1.32577417E+07	-5.08755931E+04	9.48681750E-03	1.34717730E+00	1.08357312E-02
3.00000E+02	-1.57187568E+03	-1.45163832E+07	-4.97887239E+04	5.88444804E-03	1.56579020E+00	6.78248605E-03
3.25000E+02	-1.53103078E+03	-1.57461254E+07	-4.85751837E+04	2.64378624E-03	1.69102390E+00	3.30767766E-03
3.50000E+02	-1.48809594E+03	-1.69446286E+07	-4.72997580E+04	-3.37430503E-04	1.73406301E+00	1.82958626E-04
3.75000E+02	-1.44523297E+03	-1.60378894E+07	-2.95378153E+04	-2.94837449E-03	1.68561351E+00	-3.22031479E-03
3.85000E+02	-1.42855879E+03	-1.57424376E+07	2.95524823E+04	-3.87337857E-03	1.64881681E+00	-4.12902288E-03
4.00000E+02	-1.40435483E+03	-1.52677711E+07	3.53812831E+04	-5.06326457E-03	1.57751088E+00	-5.34722350E-03
4.25000E+02	-1.36682784E+03	-1.40584531E+07	6.51893239E+04	-6.79036756E-03	1.41751978E+00	-7.54531051E-03
4.50000E+02	-1.33399270E+03	-1.18484626E+07	1.14075708E+05	-8.38595040E-03	1.20070947E+00	-9.99718921E-03
4.75000E+02	-1.30732283E+03	-8.27668177E+06	1.72265974E+05	-9.55669532E-03	9.27776373E-01	-1.16900201E-02
5.00000E+02	-1.28790037E+03	-3.25534121E+06	2.28028376E+05	-1.00589170E-02	6.23364299E-01	-1.25647233E-02
5.25000E+02	-1.27626234E+03	3.00414785E+06	2.69356366E+05	-1.00823069E-02	3.07847758E-01	-1.20175910E-02
5.50000E+02	-1.27252577E+03	9.99608743E+06	2.84477457E+05	-9.63102345E-03	-1.96285939E-02	-1.36377482E-02
5.75000E+02	-1.27714649E+03	1.69409231E+07	2.65563508E+05	-8.54166880E-03	-3.45770018E-01	-1.22819999E-02
5.77000E+02	-1.27786245E+03	1.74691635E+07	2.62643715E+05	-8.43066538E-03	-3.70182926E-01	-1.21298726E-02
6.00000E+02	-1.28938496E+03	2.30143772E+07	2.15553450E+05	-6.92215348E-03	-6.25631129E-01	-9.95811756E-03

6.25000E+02	-1.30779C56E+03	2.75078825E+07	1.40331174E+05	-4.87231311E-03	-8.37106551E-01	-6.84880852E-03
6.50000E+02	-1.33044214E+03	2.98859908E+07	4.77655174E+04	-2.54247576E-03	-9.63685884E-01	-3.21522952E-03
6.75000E+02	-1.35508932E+03	2.98280709E+07	-5.29498614E+04	-1.17712661E-04	-9.96112760E-01	6.28060035E-04
7.00000E+02	-1.37935222E+03	2.72516991E+07	-1.52091900E+05	2.20056369E-03	-9.33356952E-01	4.34270313E-03
7.25000E+02	-1.40093090E+03	2.23152423E+07	-2.40263771E+05	4.21405792E-03	-7.82816490E-01	7.59805469E-03
7.50000E+02	-1.41780994E+03	1.53991263E+07	-3.09231055E+05	5.74639567E-03	-5.59737709E-01	1.01017626E-02
7.75000E+02	-1.42845526E+03	7.06714165E+06	-3.52705705E+05	6.63820392E-03	-2.89069054E-01	1.11600719E-02
8.00000E+02	-1.43212753E+03	-1.99854657E+06	-3.67701795E+05	6.82276854E-03	-5.19385435E-03	1.10492259E-02
8.25000E+02	-1.42884855E+03	-1.10811570E+07	-3.54300825E+05	6.39628703E-03	2.65671803E-01	1.04687103E-02
8.50000E+02	-1.41911750E+03	-1.94933085E+07	-3.14561677E+05	5.44304606E-03	5.07672833E-01	8.89976778E-03
8.75000E+02	-1.40390640E+03	-2.66220592E+07	-2.52458166E+05	4.10152122E-03	7.01246208E-01	6.65160370E-03
9.00000E+02	-1.38457028E+03	-3.19789040E+07	-1.76186936E+05	2.50908875E-03	8.35824329E-01	4.15569562E-03
9.25000E+02	-1.36263739E+03	-3.55143559E+07	-1.06699527E+05	8.15616904E-04	9.08716259E-01	1.67609696E-03
9.50000E+02	-1.33965341E+03	-3.73240455E+07	-3.78962948E+04	-8.46320790E-04	9.23098102E-01	-5.40705510E-04
9.75000E+02	-1.31700970E+03	-3.74176133E+07	2.98911414E+04	-2.55141815E-03	8.81389702E-01	-2.79247574E-03
9.91000E+02	-1.30334317E+03	-3.66084864E+07	7.08032441E+04	-3.62974727E-03	8.25383798E-01	-4.20074117E-03
1.00000E+03	-1.29610047E+03	-3.58729130E+07	9.24724499E+04	-4.22304265E-03	7.84105181E-01	-4.96878821E-03
1.02500E+03	-1.27828858E+03	-3.28712283E+07	1.45797190E+05	-5.78836126E-03	6.34482220E-01	-6.92740181E-03
1.05000E+03	-1.26479511E+03	-2.86908714E+07	1.86205285E+05	-7.14210232E-03	4.39810054E-01	-8.59583111E-03
1.07500E+03	-1.25664148E+03	-2.36944604E+07	2.10626590E+05	-8.27610147E-03	2.08583422E-01	-9.84794169E-03
1.10000E+03	-1.25462178E+03	-1.83126220E+07	2.16701612E+05	-9.16093032E-03	-4.96815472E-02	-1.07426939E-02
1.12500E+03	-1.25922526E+03	-1.30257333E+07	2.02567428E+05	-9.68304327E-03	-3.20155816E-01	-1.10205233E-02
1.13300E+03	-1.26214034E+03	-1.14415918E+07	1.93084296E+05	-9.80080275E-03	-4.08614572E-01	-1.10880314E-02
1.16000E+03	-1.27725618E+03	-6.83962335E+06	1.47442206E+05	-1.00853140E-02	-7.12155619E-01	-1.13674201E-02
1.19000E+03	-1.30403661E+03	-2.36420498E+05	1.94879487E+05	-1.02018164E-02	-1.07087653E+00	-1.16859980E-02
1.20600E+03	-1.32265056E+03	2.68707376E+06	1.72133372E+05	-1.01794089E-02	-1.25556898E+00	-1.14089329E-02
1.21200E+03	-1.33036158E+03	2.46379321E+06	-3.82383603E+04	-1.01332635E-02	-1.31477195E+00	-9.81049678E-03
1.22500E+03	-1.34826910E+03	1.93644651E+06	-4.29637023E+04	-1.00468182E-02	-1.44023157E+00	-9.44863395E-03
1.24200E+03	-1.37403545E+03	1.14918086E+06	-4.97667618E+04	-9.96703129E-03	-1.58666605E+00	-7.20221119E-03
1.25000E+03	-1.38695585E+03	7.37491862E+05	-5.31754558E+04	-9.94410863E-03	-1.64343237E+00	-6.98991664E-03
1.26418E+03	-1.41094490E+03	-6.09868157E+04	-5.95051183E+04	-9.92923051E-03	-1.73993382E+00	-6.62339061E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			3.15813819E+00		
1.26418E+03	-1.41094490E+03	-6.09868157E+04	7.59846824E+03	-9.92923051E-03	-1.73993382E+00	-1.03513676E-02
1.27500E+03	-1.43036870E+03	-6.21184096E+03	2.47374595E+03	-9.93018440E-03	-1.85041792E+00	-1.00676147E-02
1.28000E+03	-1.43974578E+03	4.51915910E-06	1.80901148E-08	-9.93021601E-03	-1.90041407E+00	-9.93021601E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.82599537E+01	3.39422220E+03	8.07512953E+00	1.71578736E+02	1.55355523E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-6.23881575E-02	1.34064280E-01 -6.23881575E-02
1.16200E+03	1.46716526E-01	-2.01730123E+05	-1.00862886E+05	-6.23883593E-02	1.33224331E-02 -6.03711015E-02
1.16400E+03	5.26188297E-02	-4.03456369E+05	-1.00863714E+05	-6.23889644E-02	-1.07420298E-01 -6.03716902E-02
1.16600E+03	-2.82965765E-01	-6.05186394E+05	-1.00866665E+05	-6.23899731E-02	-2.28164568E-01 -6.03726398E-02
1.16800E+03	-8.60041056E-01	-8.06924444E+05	-1.00871739E+05	-6.23913852E-02	-3.48911098E-01 -6.03739504E-02
1.17000E+03	-1.67861229E+00	-1.00867477E+06	-1.00878937E+05	-6.23932008E-02	-4.69660611E-01 -6.03756221E-02
1.18000E+03	-9.39419221E+00	-2.01775912E+06	-1.00946783E+05	-6.24083324E-02	-1.07347818E+00 -6.03893967E-02
1.19000E+03	-2.31487876E+01	-3.02778743E+06	-1.01067731E+05	-6.24335591E-02	-1.67747866E+00 -6.04122045E-02
1.20000E+03	-4.29446793E+01	-4.03929082E+06	-1.01241803E+05	-6.24688931E-02	-2.28175242E+00 -6.04440570E-02
1.20600E+03	-5.77233239E+01	-4.64712193E+06	-1.01371756E+05	-6.24949519E-02	-2.64448551E+00 -6.04675168E-02
1.21000E+03	-6.88180895E+01	-4.22641940E+06	1.05123914E+05	-6.25067832E-02	-2.90290340E+00 -6.46092615E-02
1.21200E+03	-7.47531180E+01	-4.01622338E+06	1.05071726E+05	-6.25122783E-02	-3.03212643E+00 -6.46137128E-02
1.22000E+03	-1.01077938E+02	-3.17655126E+06	1.04840243E+05	-6.25314582E-02	-3.54909781E+00 -6.46282631E-02
1.23000E+03	-1.39800545E+02	-2.12980396E+06	1.04499743E+05	-6.25491442E-02	-4.19544158E+00 -6.46391390E-02
1.24000E+03	-1.84986998E+02	-1.08674586E+06	1.04102404E+05	-6.25598638E-02	-4.84185358E+00 -6.46419119E-02
1.24200E+03	-1.94799988E+02	3.72900068E-07	-2.14947301E-07	-6.25608806E-02	-4.97110573E+00 -6.25608806E-02

t=0
Start Booster
Phase
Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.12588489E+01	5.07782355E+03	8.16403912E+02	3.10946977E+02	3.00850003E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	5.87172550E-02	-1.03486677E+01 5.87172550E-02
-3.70000E+01	-1.25867070E+02	-8.83806050E+04	-8.66084384E+03	5.85188848E-02	-9.15143689E+00 6.08596534E-02
-2.50000E+01	-2.31031415E+02	-2.20743896E+05	-1.33309054E+04	5.76195228E-02	-8.37595390E+00 6.54612319E-02
0.	-4.19861203E+02	-6.62614117E+05	-2.17148970E+04	5.29699676E-02	-6.74045771E+00 6.33103948E-02
2.50000E+01	-5.68926186E+02	-1.29175189E+06	-2.83319634E+04	4.70703924E-02	-5.21728082E+00 5.51652391E-02
5.00000E+01	-6.82562484E+02	-2.06615677E+06	-3.33756532E+04	4.26490847E-02	-3.89615975E+00 5.00658965E-02
7.50000E+01	-7.64936020E+02	-2.94897950E+06	-3.70320390E+04	3.89600102E-02	-2.71258291E+00 4.54568591E-02
1.00000E+02	-8.18985653E+02	-3.90726493E+06	-3.94293717E+04	3.44558912E-02	-1.62413620E+00 4.13733249E-02
1.25000E+02	-8.47274669E+02	-4.91089713E+06	-4.06821075E+04	2.86578982E-02	-6.56386106E-01 3.57951101E-02
1.50000E+02	-8.53290403E+02	-5.93310939E+06	-4.09450679E+04	2.15243985E-02	1.53030792E-01 2.87077437E-02
1.75000E+02	-8.41897052E+02	-6.95175706E+06	-4.04369595E+04	1.76889853E-02	7.46326257E-01 2.17326812E-02
2.00000E+02	-8.16963987E+02	-7.94993905E+06	-3.93273258E+04	1.32525790E-02	1.23415199E+00 1.71853116E-02
2.25000E+02	-7.81331422E+02	-8.91415625E+06	-3.77422836E+04	8.23153559E-03	1.60032097E+00 1.20057639E-02
2.50000E+02	-7.38274464E+02	-9.83429062E+06	-3.58276766E+04	3.39070014E-03	1.81917718E+00 5.18295520E-03
2.75000E+02	-6.91725405E+02	-1.07042832E+07	-3.37584479E+04	9.96851101E-06	1.89165766E+00 9.05038847E-04
3.00000E+02	-6.44545152E+02	-1.15219929E+07	-3.16618427E+04	-2.87436068E-03	1.87283634E+00 -2.30327679E-03
3.25000E+02	-5.98772948E+02	-1.22879027E+07	-2.96280451E+04	-5.42515310E-03	1.78051454E+00 -5.02021783E-03
3.50000E+02	-5.56118315E+02	-1.30045527E+07	-2.77328454E+04	-7.73250609E-03	1.62438476E+00 -7.42739097E-03
3.75000E+02	-5.18287250E+02	-5.11908004E+06	7.93386135E+04	-8.76762045E-03	1.39798631E+00 -9.49805248E-03
3.85000E+02	-5.04787775E+02	-4.32560405E+06	7.93563739E+04	-9.04269084E-03	1.30180791E+00 -9.72916466E-03
4.00000E+02	-4.86370524E+02	-3.09947403E+06	8.59149629E+04	-9.32946878E-03	1.15362082E+00 -1.00189950E-02
4.25000E+02	-4.60745151E+02	-6.14677919E+05	1.16028705E+05	-9.55754270E-03	8.94166220E-01 -1.09012451E-02
4.50000E+02	-4.41841617E+02	2.79931479E+06	1.57779737E+05	-9.43295578E-03	6.14919968E-01 -1.16614831E-02
4.75000E+02	-4.30089488E+02	7.24199086E+06	1.95732796E+05	-8.88435444E-03	3.26679187E-01 -1.13082900E-02
5.00000E+02	-4.25367913E+02	1.24339638E+07	2.15536501E+05	-8.07841506E-03	5.41802534E-02 -1.04469480E-02
5.25000E+02	-4.27128003E+02	1.77690456E+07	2.05495920E+05	-7.14690595E-03	-1.90014711E-01 -8.62336259E-03
5.50000E+02	-4.34566317E+02	2.24098137E+07	1.60101498E+05	-5.82114707E-03	-4.06675932E-01 -8.07609775E-03
5.75000E+02	-4.46920000E+02	2.55199211E+07	8.44958509E+04	-3.87577322E-03	-5.72215239E-01 -5.06585563E-03
5.77000E+02	-4.48074299E+02	2.56818904E+07	7.74533741E+04	-3.71059851E-03	-5.82083043E-01 -4.80149111E-03
6.00000E+02	-4.62418601E+02	2.64742894E+07	-1.02852686E+04	-1.76328247E-03	-6.56306081E-01 -1.61841954E-03

t0,5

6.25000E+02	-4.78916601E+02	2.49543225E+07	-1.11216100E+05	3.27431978E-04	-6.52590673E-01	1.89385593E-03
6.50000E+02	-4.94251966E+02	2.09731593E+07	-2.05029139E+05	2.19512802E-03	-5.64316356E-01	5.08286237E-03
6.75000E+02	-5.06455017E+02	1.48633344E+07	-2.79679293E+05	3.65270479E-03	-4.04136901E-01	7.59184976E-03
7.00000E+02	-5.13976221E+02	7.22896404E+06	-3.25690498E+05	4.55126180E-03	-1.92776872E-01	9.13845191E-03
7.25000E+02	-5.15860435E+02	-1.13253565E+06	-3.37221482E+05	4.79902340E-03	4.32756731E-02	9.54862173E-03
7.50000E+02	-5.11854310E+02	-9.33048417E+06	-3.12722690E+05	4.37300427E-03	2.74768900E-01	8.77754921E-03
7.75000E+02	-5.02433656E+02	-1.64915350E+07	-2.55153920E+05	3.36229681E-03	4.70816545E-01	6.63350091E-03
8.00000E+02	-4.88852430E+02	-2.18763249E+07	-1.72162222E+05	2.00200817E-03	6.06521026E-01	3.98088429E-03
8.25000E+02	-4.72749643E+02	-2.49710122E+07	-7.37116437E+04	4.67657768E-04	6.73381876E-01	1.31491804E-03
8.50000E+02	-4.55824829E+02	-2.55203952E+07	2.97087047E+04	-1.11368383E-03	6.71410546E-01	-1.44015311E-03
8.75000E+02	-4.39770938E+02	-2.35305505E+07	1.27784004E+05	-2.54873932E-03	6.04786824E-01	-3.83948684E-03
9.00000E+02	-4.26067001E+02	-1.92538481E+07	2.09122564E+05	-3.71823388E-03	4.84753237E-01	-5.67265036E-03
9.25000E+02	-4.15861870E+02	-1.33731459E+07	2.57652181E+05	-4.54475854E-03	3.28454843E-01	-6.62259871E-03
9.50000E+02	-4.09811537E+02	-6.55227959E+06	2.84754161E+05	-5.00017706E-03	1.53489764E-01	-7.29658158E-03
9.75000E+02	-4.08289795E+02	6.95119000E+05	2.91572563E+05	-5.13394016E-03	-3.23202734E-02	-7.48533180E-03
9.91000E+02	-4.09759633E+02	5.31896928E+06	2.84991415E+05	-5.04620714E-03	-1.51229787E-01	-7.34452500E-03
1.00000E+03	-4.11414972E+02	7.85252487E+06	2.77582533E+05	-4.93834948E-03	-2.16623261E-01	-7.17691830E-03
1.02500E+03	-4.18994595E+02	1.44075828E+07	2.43641042E+05	-4.43013257E-03	-3.87141326E-01	-6.33357821E-03
1.05000E+03	-4.30525969E+02	1.98867637E+07	1.91997000E+05	-3.67334136E-03	-5.31741861E-01	-5.17331793E-03
1.07500E+03	-4.45267057E+02	2.38873993E+07	1.25991040E+05	-2.72275526E-03	-6.42464226E-01	-3.66298690E-03
1.10000E+03	-4.62284595E+02	2.61011783E+07	4.97821907E+04	-1.66527930E-03	-7.13783980E-01	-2.02865296E-03
1.12500E+03	-4.80587388E+02	2.63254514E+07	-3.36080457E+04	-7.88414992E-04	-7.45612450E-01	-5.66513129E-04
1.13300E+03	-4.86563221E+02	2.59402660E+07	-6.27061002E+04	-5.36655867E-04	-7.48345902E-01	-1.18615199E-04
1.16000E+03	-5.06582859E+02	2.28647409E+07	-1.55738191E+05	2.36644810E-04	-7.28404178E-01	1.59088995E-03
1.19000E+03	-5.26459368E+02	8.41018072E+06	-5.07963285E+05	7.76560177E-04	-5.94564952E-01	4.64515473E-03
1.20600E+03	-5.35377778E+02	1.35112426E+05	-5.24491670E+05	8.53518068E-04	-5.20313268E-01	4.59988714E-03
1.21200E+03	-5.38484612E+02	1.49846543E+05	1.84361521E+03	8.56080919E-04	-5.15298083E-01	8.40519123E-04
1.22500E+03	-5.45111273E+02	1.56751842E+05	-7.71772665E+02	8.62201640E-04	-5.04188161E-01	8.72947042E-04
1.24200E+03	-5.53548652E+02	1.15169647E+05	-4.10239748E+03	8.69432111E-04	-4.88020409E-01	1.09734308E-03
1.25000E+03	-5.57416299E+02	7.62250619E+04	-5.62894582E+03	8.71776603E-04	-4.78891359E-01	1.18449582E-03
1.26418E+03	-5.64080794E+02	-2.23649010E+04	-8.25990390E+03	8.73068995E-04	-4.61038175E-01	1.33195255E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			3.49210026E-01		
1.26418E+03	-5.64080794E+02	-2.23649010E+04	2.84049645E+03	8.73068995E-04	-4.61038175E-01	7.15263637E-04
1.27500E+03	-5.69024190E+02	-2.21944463E+03	8.89172305E+02	8.72722286E-04	-4.52713234E-01	8.23323824E-04
1.28000E+03	-5.71277155E+02	-3.80250643E-05	-1.01063155E-07	8.72711024E-04	-4.48472967E-01	8.72711024E-04

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
7.12588489E+01	5.07782355E+03	8.07512953E+00	5.13532065E+02	4.33293369E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	1.38670718E-01	-3.14226146E+00	1.38670718E-01
1.16200E+03	-6.00210132E+00	5.31425186E+05	2.65613675E+05	1.38671250E-01	-2.87554818E+00	1.33358976E-01
1.16400E+03	-1.14864777E+01	1.06257922E+06	2.65541528E+05	1.38672844E-01	-2.60882734E+00	1.33362013E-01
1.16600E+03	-1.64374057E+01	1.59359598E+06	2.65476399E+05	1.38675500E-01	-2.34209951E+00	1.33365972E-01
1.16800E+03	-2.08548694E+01	2.12448949E+06	2.65418287E+05	1.38679218E-01	-2.07536284E+00	1.33370852E-01
1.17000E+03	-2.47388494E+01	2.65527380E+06	2.65367193E+05	1.38683998E-01	-1.80861549E+00	1.33376654E-01
1.18000E+03	-3.61555515E+01	5.30804857E+06	2.65217007E+05	1.38723816E-01	-4.74654023E-01	1.33419475E-01
1.19000E+03	-3.42301129E+01	7.96019899E+06	2.65242336E+05	1.38790157E-01	8.59850728E-01	1.33485310E-01
1.20000E+03	-1.89559504E+01	1.06134806E+07	2.65443267E+05	1.38883023E-01	2.19512888E+00	1.33574158E-01
1.20600E+03	-3.38046505E+00	1.22067233E+07	2.65648162E+05	1.38951483E-01	2.99676277E+00	1.33638520E-01
1.21000E+03	9.75970966E+00	1.11712207E+07	-2.58782996E+05	1.38982654E-01	3.57334202E+00	1.44158314E-01
1.21200E+03	1.71947195E+01	1.06537512E+07	-2.58685189E+05	1.38997204E-01	3.86167138E+00	1.44170907E-01
1.22000E+03	5.27020453E+01	8.58605717E+06	-2.58218091E+05	1.39048508E-01	5.01521546E+00	1.44212870E-01
1.23000E+03	1.10065492E+02	6.00749123E+06	-2.57463475E+05	1.39097149E-01	6.45752939E+00	1.44246419E-01
1.24000E+03	1.81853404E+02	3.43742018E+06	-2.56519107E+05	1.39128627E-01	7.90007397E+00	1.44259009E-01
1.24200E+03	1.97942070E+02	-7.11664199E-06	1.45608897E-06	1.39131892E-01	8.18851492E+00	1.39131892E-01

\$AS001

20 SECOND BURN

N=5,WOSQ=0.,DWOS=10.,

H=0.,CODEI=1,CODEII=1,

P=0,ACC=0.,BEAM=2.,

OUTST=-57.,-37.,-25.,0.,

25.,50.,75.,100.,125.,150.,175.,

200.,225.,250.,275.,300.,325.,

350.,375.,385.,400.,425.,450.,

475.,500.,525.,550.,575.,577.,

600.,625.,650.,675.,700.,725.,

750.,775.,800.,825.,850.,875.,900.,

925.,950.,975.,991.,1000.,1025.,

1050.,1075.,1100.,1125.,1133.,1160.,1190.,

E015

151

t=20

Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.97098109E+01	3.88476647E+02	7.40336878E+02	7.24116700E+02	6.56246934E+02	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.			2.31398007E-02	-1.13916385E+01	2.31398007E-02
-3.70000E+01	-1.47036060E+02	-7.63366241E+03	-7.58103774E+02			2.31227785E-02	-1.09268648E+01	2.33276714E-02
-2.50000E+01	-2.76454539E+02	-1.93800636E+04	-1.19770088E+03			2.30443749E-02	-1.06428818E+01	2.37489048E-02
0.	-5.35088088E+02	-6.04090140E+04	-2.07619395E+03			2.26278859E-02	-1.00484877E+01	2.36165497E-02
2.50000E+01	-7.78941539E+02	-1.22771244E+05	-2.90447482E+03			2.20789245E-02	-9.46265140E+00	2.29087745E-02
5.00000E+01	-1.00838379E+03	-2.05225210E+05	-3.68380234E+03			2.16495507E-02	-8.89479010E+00	2.24681735E-02
7.50000E+01	-1.22378957E+03	-3.06564102E+05	-4.41545625E+03			2.12750548E-02	-8.33944103E+00	2.20496963E-02
1.00000E+02	-1.42542293E+03	-4.25608088E+05	-5.10031924E+03			2.07952399E-02	-7.79235107E+00	2.16900328E-02
1.25000E+02	-1.61351149E+03	-5.61196493E+05	-5.73916736E+03			2.01477776E-02	-7.25640420E+00	2.11546491E-02
1.50000E+02	-1.78839123E+03	-7.12192374E+05	-6.33314087E+03			1.93116499E-02	-6.73625691E+00	2.04227273E-02
1.75000E+02	-1.95061112E+03	-8.77495557E+05	-6.88412726E+03			1.88392118E-02	-6.24263582E+00	1.95276245E-02
2.00000E+02	-2.10063321E+03	-1.05605336E+06	-7.39367712E+03			1.82643827E-02	-5.76076367E+00	1.90037504E-02
2.25000E+02	-2.23878539E+03	-1.24684331E+06	-7.86290392E+03			1.75795786E-02	-5.29339855E+00	1.83658690E-02
2.50000E+02	-2.36547846E+03	-1.44887388E+06	-8.29320421E+03			1.68859807E-02	-4.84610712E+00	1.73008426E-02
2.75000E+02	-2.48131446E+03	-1.66119663E+06	-8.68662749E+03			1.63751276E-02	-4.42289591E+00	1.66054445E-02
3.00000E+02	-2.58676188E+03	-1.88291136E+06	-9.04477221E+03			1.59159960E-02	-4.01452622E+00	1.60791364E-02
3.25000E+02	-2.68215579E+03	-2.11315073E+06	-9.36877155E+03			1.54885048E-02	-3.61842180E+00	1.56165506E-02
3.50000E+02	-2.76778716E+03	-2.35107364E+06	-9.65961247E+03			1.50817363E-02	-3.23341880E+00	1.51880108E-02
3.75000E+02	-2.84389261E+03	-3.86464045E+06	-2.59634731E+04			1.45291323E-02	-2.85680702E+00	1.47681654E-02
3.85000E+02	-2.87172788E+03	-4.12428931E+06	-2.59662743E+04			1.42966863E-02	-2.71035923E+00	1.45213080E-02
4.00000E+02	-2.91076755E+03	-4.51490355E+06	-2.61135950E+04			1.39660069E-02	-2.49517708E+00	1.41755863E-02
4.25000E+02	-2.96877369E+03	-5.17054807E+06	-2.63324929E+04			1.33993559E-02	-2.14712251E+00	1.37043066E-02
4.50000E+02	-3.01824488E+03	-5.83125969E+06	-2.65191762E+04			1.27263180E-02	-1.81244596E+00	1.31008826E-02
4.75000E+02	-3.05955257E+03	-6.49624986E+06	-2.66750394E+04			1.20266632E-02	-1.49456430E+00	1.23570042E-02
5.00000E+02	-3.09312811E+03	-7.16476867E+06	-2.68017325E+04			1.14581016E-02	-1.19352393E+00	1.17526261E-02
5.25000E+02	-3.11935380E+03	-7.83935627E+06	-2.85223119E+04			1.09928703E-02	-9.06311460E-01	1.11977988E-02
5.50000E+02	-3.13852478E+03	-8.67004289E+06	-3.74258444E+04			1.04571433E-02	-6.27509628E-01	1.09842679E-02
5.75000E+02	-3.15085386E+03	-9.68404980E+06	-4.31761095E+04			9.71802469E-03	-3.60867747E-01	1.03261389E-02
5.77000E+02	-3.15155501E+03	-9.77073246E+06	-4.35033409E+04			9.65526768E-03	-3.40273479E-01	1.02679908E-02
6.00000E+02	-3.15673580E+03	-1.08037618E+07	-4.59173486E+04			8.89236336E-03	-1.12279044E-01	9.53908658E-03

6.25000E+02	-3.15666614E+03	-1.19567441E+07	-4.58792031E+04	7.97459414E-03	1.14990936E-01	8.62078010E-03
6.50000E+02	-3.15121684E+03	-1.30767805E+07	-4.33294532E+04	6.96474891E-03	3.17696160E-01	7.57502289E-03
6.75000E+02	-3.14104088E+03	-1.41048164E+07	-3.85729208E+04	5.86791703E-03	4.92756666E-01	6.41119761E-03
7.00000E+02	-3.12686471E+03	-1.49898536E+07	-3.19487488E+04	4.69363128E-03	6.3739096E-01	5.14361366E-03
7.25000E+02	-3.10947937E+03	-1.56897600E+07	-2.38262449E+04	3.45518474E-03	7.49225776E-01	3.79076565E-03
7.50000E+02	-3.08972896E+03	-1.61719582E+07	-1.45995068E+04	2.16888713E-03	8.26399246E-01	2.37451399E-03
7.75000E+02	-3.06849120E+03	-1.64139676E+07	-4.68099930E+03	8.95579066E-04	8.67719579E-01	9.55591877E-04
8.00000E+02	-3.04664792E+03	-1.64036689E+07	5.51968756E+03	-2.60944905E-04	8.75364834E-01	-3.24389590E-04
8.25000E+02	-3.02500350E+03	-1.61387561E+07	1.56289274E+04	-1.31888520E-03	8.52536133E-01	-1.49852805E-03
8.50000E+02	-3.00428364E+03	-1.56258444E+07	2.53046023E+04	-2.30671983E-03	8.01420885E-01	-2.58479239E-03
8.75000E+02	-2.98516645E+03	-1.48797822E+07	3.42312572E+04	-3.19273620E-03	7.24738441E-01	-3.53850648E-03
9.00000E+02	-2.96824763E+03	-1.39230572E+07	4.19021412E+04	-3.97374789E-03	6.25690289E-01	-4.36535669E-03
9.25000E+02	-2.95404938E+03	-1.28079678E+07	4.70597547E+04	-4.64413789E-03	5.07688106E-01	-5.02365204E-03
9.50000E+02	-2.94299747E+03	-1.15817974E+07	5.08441677E+04	-5.19880923E-03	3.74646653E-01	-5.60884284E-03
9.75000E+02	-2.93544669E+03	-1.02757498E+07	5.34302559E+04	-5.69581666E-03	2.27807478E-01	-6.12670582E-03
9.91000E+02	-2.93260258E+03	-9.41233692E+06	5.44047307E+04	-5.98222660E-03	1.27386643E-01	-6.42097443E-03
1.00000E+03	-2.93171927E+03	-8.92119756E+06	5.47073356E+04	-6.13223195E-03	6.89047522E-02	-6.57342014E-03
1.02500E+03	-2.93209619E+03	-7.55209193E+06	5.45799127E+04	-6.50612938E-03	-1.00237670E-01	-6.93253494E-03
1.05000E+03	-2.93680435E+03	-6.20455959E+06	5.29701857E+04	-6.80766330E-03	-2.77310840E-01	-7.22149287E-03
1.07500E+03	-2.94601870E+03	-4.91644324E+06	4.98180325E+04	-7.04768365E-03	-4.60433942E-01	-7.41946071E-03
1.10000E+03	-2.95986660E+03	-3.72687562E+06	4.50802004E+04	-7.22923402E-03	-6.47805105E-01	-7.55828658E-03
1.12500E+03	-2.97842125E+03	-2.67616806E+06	3.86079457E+04	-7.33565228E-03	-8.36806435E-01	-7.59056669E-03
1.13300E+03	-2.98535876E+03	-2.37751714E+06	3.60246137E+04	-7.35997027E-03	-8.97572880E-01	-7.60013436E-03
1.16000E+03	-3.01237040E+03	-1.54032370E+06	2.65335035E+04	-7.42096443E-03	-1.10349298E+00	-7.65169055E-03
1.19000E+03	-3.04891977E+03	-7.90679833E+05	2.11418479E+04	-7.46005308E-03	-1.33289362E+00	-7.62106715E-03
1.20600E+03	-3.07122029E+03	-4.79470854E+05	1.80127753E+04	-7.47134227E-03	-1.45464934E+00	-7.60000495E-03
1.21200E+03	-3.08008406E+03	-4.23151435E+05	9.25207746E+03	-7.47942305E-03	-1.49993877E+00	-7.55751904E-03
1.22500E+03	-3.10022400E+03	-3.06784856E+05	8.64402648E+03	-7.49370376E-03	-1.59851446E+00	-7.61405466E-03
1.24200E+03	-3.12851147E+03	-1.66999682E+05	7.79005903E+03	-7.50581618E-03	-1.73007721E+00	-7.93859724E-03
1.25000E+03	-3.14260580E+03	-1.06371181E+05	7.36451279E+03	-7.50912272E-03	-1.79350619E+00	-7.91826232E-03
1.26418E+03	-3.16883188E+03	-7.49993564E+03	6.57266493E+03	-7.51153289E-03	-1.90550051E+00	-7.87668094E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -2.31674134E+00					
1.26418E+03	-3.16883188E+03	-7.49993564E+03	9.38665503E+02	-7.51153289E-03	-1.90550051E+00	-7.56368097E-03
1.27500E+03	-3.18989112E+03	-7.59425758E+02	3.02824264E+02	-7.51164995E-03	-1.98715060E+00	-7.52847352E-03
1.28000E+03	-3.19992087E+03	-1.45385758E-12	-1.05672633E-13	-7.51165381E-03	-2.02475105E+00	-7.51165381E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
1.97098109E+01	3.88476647E+02	8.07512953E+00	2.42953079E+01	2.39194216E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-9.51639913E-03	-1.07698439E+00	-9.51639913E-03
1.16200E+03	-2.16746437E+00	-7.61847082E+03	-3.81190371E+03	-9.51640674E-03	-1.09586483E+00	-9.44016867E-03
1.16400E+03	-4.37807434E+00	-1.52444967E+04	-3.81412850E+03	-9.51642960E-03	-1.11474514E+00	-9.44014703E-03
1.16600E+03	-6.62644490E+00	-2.28750102E+04	-3.81639130E+03	-9.51646772E-03	-1.13362542E+00	-9.44013990E-03
1.16800E+03	-8.91257604E+00	-3.05100872E+04	-3.81869210E+03	-9.51652111E-03	-1.15250571E+00	-9.44014726E-03
1.17000E+03	-1.12364678E+01	-3.81498039E+04	-3.82103090E+03	-9.51658977E-03	-1.17138672E+00	-9.44016915E-03
1.18000E+03	-2.34223404E+01	-7.64206415E+04	-3.83329496E+03	-9.51716252E-03	-1.26578905E+00	-9.44049662E-03
1.19000E+03	-3.65522658E+01	-1.14818870E+05	-3.84650913E+03	-9.51811860E-03	-1.36019717E+00	-9.44118842E-03
1.20000E+03	-5.06263130E+01	-1.53353991E+05	-3.86067348E+03	-9.51945935E-03	-1.45461404E+00	-9.44224588E-03
1.20600E+03	-5.95239624E+01	-1.76544725E+05	-3.86962822E+03	-9.52044902E-03	-1.51126988E+00	-9.44305645E-03
1.21000E+03	-6.56459279E+01	-1.58518921E+05	4.50321489E+03	-9.52089576E-03	-1.54971310E+00	-9.61096006E-03
1.21200E+03	-6.87645762E+01	-1.49515624E+05	4.50007623E+03	-9.52110112E-03	-1.56893516E+00	-9.61110264E-03
1.22000E+03	-8.16236180E+01	-1.13566367E+05	4.48713468E+03	-9.52180263E-03	-1.64582589E+00	-9.61154532E-03
1.23000E+03	-9.85624600E+01	-6.87794521E+04	4.47008716E+03	-9.52241035E-03	-1.74194294E+00	-9.61181209E-03
1.24000E+03	-1.16462480E+02	-2.41678488E+04	4.45207228E+03	-9.52272007E-03	-1.83806107E+00	-9.61176152E-03
1.24200E+03	-1.20157826E+02	8.00159208E-12	8.25895082E-10	-9.52274125E-03	-1.85728322E+00	-9.52274125E-03

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Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.72029350E+01	1.38405838E+03	7.40336878E+02	7.27481266E+02	5.77798519E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	5.15655124E-02	-1.58889883E+01 5.15655124E-02
-3.70000E+01	-2.01171551E+02	-3.76201343E+04	-3.72001501E+03	5.14814455E-02	-1.48479330E+01 5.24868550E-02
-2.50000E+01	-3.75449338E+02	-9.50095266E+04	-5.82916807E+03	5.10962104E-02	-1.41983648E+01 5.45251328E-02
0.	-7.13297078E+02	-2.92707926E+05	-9.91771057E+03	4.90671929E-02	-1.28331132E+01 5.37899122E-02
2.50000E+01	-1.01743325E+03	-5.87492558E+05	-1.35981261E+04	4.64236257E-02	-1.15118070E+01 5.03088046E-02
5.00000E+01	-1.28968457E+03	-9.69405141E+05	-1.68926287E+04	4.43820192E-02	-1.02782843E+01 4.81359367E-02
7.50000E+01	-1.53187547E+03	-1.42909353E+06	-1.98234205E+04	4.26242408E-02	-9.10549691E+00 4.61020338E-02
1.00000E+02	-1.74529357E+03	-1.95767279E+06	-2.24058308E+04	4.04031836E-02	-7.97347171E+00 4.43340311E-02
1.25000E+02	-1.93105481E+03	-2.54659309E+06	-2.46534237E+04	3.74460114E-02	-6.89542283E+00 4.17711734E-02
1.50000E+02	-2.09076557E+03	-3.18771374E+06	-2.65856276E+04	3.36787369E-02	-5.89212851E+00 3.83428821E-02
1.75000E+02	-2.22692897E+03	-3.87350592E+06	-2.82331083E+04	3.15792262E-02	-5.00697423E+00 3.44025371E-02
2.00000E+02	-2.34161989E+03	-4.59720212E+06	-2.96206676E+04	2.90599026E-02	-4.17571798E+00 3.20219694E-02
2.25000E+02	-2.43632743E+03	-5.35252236E+06	-3.07663230E+04	2.61000955E-02	-3.40974925E+00 2.91767278E-02
2.50000E+02	-2.51287373E+03	-6.13368248E+06	-3.16921591E+04	2.31418452E-02	-2.73075964E+00 2.47272238E-02
2.75000E+02	-2.57378633E+03	-6.93555994E+06	-3.24288302E+04	2.09938288E-02	-2.15102383E+00 2.18536457E-02
3.00000E+02	-2.62099773E+03	-7.75374465E+06	-3.29998127E+04	1.90899072E-02	-1.63259882E+00 1.96851240E-02
3.25000E+02	-2.65588800E+03	-8.58430902E+06	-3.34217362E+04	1.73413453E-02	-1.16447662E+00 1.77981301E-02
3.50000E+02	-2.67964413E+03	-9.42370918E+06	-3.37089453E+04	1.56998936E-02	-7.41377712E-01 1.60707574E-02
3.75000E+02	-2.69336115E+03	-1.38407395E+07	-4.67531658E+04	1.36282121E-02	-3.62993316E-01 1.40586458E-02
3.85000E+02	-2.69630746E+03	-1.43082768E+07	-4.67542204E+04	1.28090791E-02	-2.26648379E-01 1.32135273E-02
4.00000E+02	-2.69828087E+03	-1.50098353E+07	-4.67805480E+04	1.16860692E-02	-3.72927371E-02 1.20615150E-02
4.25000E+02	-2.69564021E+03	-1.61790982E+07	-4.67448059E+04	9.86002819E-03	2.42500250E-01 1.04013693E-02
4.50000E+02	-2.68655989E+03	-1.73463535E+07	-4.66224519E+04	7.80926828E-03	4.77753796E-01 8.46777748E-03
4.75000E+02	-2.67223114E+03	-1.85096308E+07	-4.64294309E+04	5.77166485E-03	6.61771421E-01 6.34664232E-03
5.00000E+02	-2.65390521E+03	-1.96673793E+07	-4.61827909E+04	4.18106449E-03	7.98729440E-01 4.68856769E-03
5.25000E+02	-2.63263139E+03	-2.08074386E+07	-4.03490664E+04	2.92435723E-03	8.98378596E-01 3.21425908E-03
5.50000E+02	-2.60930926E+03	-2.13401673E+07	-1.68830099E+03	1.55580427E-03	9.62208262E-01 1.57958316E-03
5.75000E+02	-2.58502860E+03	-2.08780098E+07	3.87366197E+04	-1.53337420E-04	9.73152180E-01 -6.98923613E-04
5.77000E+02	-2.58308388E+03	-2.07973018E+07	4.19704926E+04	-2.87777386E-04	9.71574246E-01 -8.78911084E-04
6.00000E+02	-2.56117415E+03	-1.94093519E+07	7.84428205E+04	-1.78450321E-03	9.27996988E-01 -2.88933166E-03

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6.25000E+02	-2.53911743E+03	-1.69808096E+07	1.15163535E+05	-3.25802131E-03	8.30352393E-01	-4.88004292E-03
6.50000E+02	-2.52009099E+03	-1.36933153E+07	1.46838803E+05	-4.50020579E-03	6.86519208E-01	-6.56835794E-03
6.75000E+02	-2.50514425E+03	-9.69559590E+06	1.71721661E+05	-5.44748972E-03	5.05195109E-01	-7.86610467E-03
7.00000E+02	-2.49508378E+03	-5.17517023E+06	1.88469377E+05	-6.04993243E-03	2.97049506E-01	-8.70443070E-03
7.25000E+02	-2.49043054E+03	-3.47307067E+05	1.96214681E+05	-6.27391460E-03	7.41918139E-02	-9.03750166E-03
7.50000E+02	-2.49139133E+03	4.55750719E+06	1.94613195E+05	-6.10387880E-03	-1.50436952E-01	-8.84490971E-03
7.75000E+02	-2.49784385E+03	9.30698536E+06	1.83873857E+05	-5.56536489E-03	-3.62147302E-01	-7.92272203E-03
8.00000E+02	-2.57926153E+03	1.36823592E+07	1.64871983E+05	-4.75535715E-03	-5.46872284E-01	-6.65043741E-03
8.25000E+02	-2.52486584E+03	1.74924980E+07	1.38895864E+05	-3.73967038E-03	-6.97370470E-01	-5.33617456E-03
8.50000E+02	-2.54378073E+03	2.05812084E+07	1.07417626E+05	-2.55369471E-03	-8.10509779E-01	-3.73410819E-03
8.75000E+02	-2.56500990E+03	2.28312425E+07	7.20920919E+04	-1.29157818E-03	-8.81886766E-01	-2.01978113E-03
9.00000E+02	-2.58750187E+03	2.41696096E+07	3.58501546E+04	-1.57994995E-05	-9.11050135E-01	-3.50847674E-04
9.25000E+02	-2.61022016E+03	2.46929389E+07	6.48651710E+03	1.20964739E-03	-9.00433508E-01	1.15733677E-03
9.50000E+02	-2.63221188E+03	2.45167995E+07	-2.03455352E+04	2.33059242E-03	-8.54743312E-01	2.49466932E-03
9.75000E+02	-2.65264692E+03	2.36914905E+07	-4.52792138E+04	3.42859746E-03	-7.76019501E-01	3.79375241E-03
9.91000E+02	-2.66453336E+03	2.28492527E+07	-5.97823814E+04	4.10611602E-03	-7.08916901E-01	4.58823200E-03
1.00000E+03	-2.67071903E+03	2.22769048E+07	-6.73269909E+04	4.47542259E-03	-6.65677247E-01	5.01838219E-03
1.02500E+03	-2.68565967E+03	2.03569731E+07	-8.55578358E+04	5.44480021E-03	-5.26015080E-01	6.11322080E-03
1.05000E+03	-2.69678452E+03	1.80378252E+07	-9.91357044E+04	6.28803271E-03	-3.61024294E-01	7.06253040E-03
1.07500E+03	-2.70351145E+03	1.54449597E+07	-1.07347382E+05	7.01209650E-03	-1.74778425E-01	7.81319637E-03
1.10000E+03	-2.70536406E+03	1.27200188E+07	-1.09615722E+05	7.60504298E-03	2.83571394E-02	8.40515774E-03
1.12500E+03	-2.70201133E+03	1.00174334E+07	-1.05414914E+05	7.98378251E-03	2.41107881E-01	8.67979935E-03
1.13300E+03	-2.69980339E+03	9.18533521E+06	-1.02486234E+05	8.07621814E-03	3.10876481E-01	8.75945969E-03
1.16000E+03	-2.68817178E+03	6.60919453E+06	-8.81777602E+04	8.32363520E-03	5.51963597E-01	9.09039833E-03
1.19000E+03	-2.66748285E+03	3.85234391E+06	-8.39530682E+04	8.50085479E-03	8.27041182E-01	9.14023246E-03
1.20600E+03	-2.65308222E+03	2.57042654E+06	-7.67796958E+04	8.55814197E-03	9.73002492E-01	9.10656836E-03
1.21200E+03	-2.64708318E+03	2.28788293E+06	-4.67650760E+04	8.60164344E-03	1.02667532E+00	8.99638340E-03
1.22500E+03	-2.63296443E+03	1.68962601E+06	-4.52468058E+04	8.67953717E-03	1.14544084E+00	9.30950908E-03
1.24200E+03	-2.61207707E+03	9.39074920E+05	-4.30019848E+04	8.74692249E-03	1.31555834E+00	1.11359216E-02
1.25000E+03	-2.60119696E+03	5.99689607E+05	-4.18315926E+04	8.76555429E-03	1.40446845E+00	1.10895317E-02
1.26418E+03	-2.58017171E+03	2.22720482E+04	-3.95697530E+04	8.77882321E-03	1.56096617E+00	1.09771428E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			4.24664593E+00		
1.26418E+03	-2.58017171E+03	2.22720482E+04	-2.77594027E+03	8.77882321E-03	1.56096617E+00	8.93304211E-03
1.27500E+03	-2.56276215E+03	2.26760877E+03	-9.03097393E+02	8.77917150E-03	1.65706687E+00	8.82934358E-03
1.28000E+03	-2.55436676E+03	-3.15581017E-09	-3.03792021E-12	8.77918304E-03	1.70108875E+00	8.77918304E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
3.72029350E+01	1.38405838E+03	8.07512953E+00	2.09307415E+01	1.98661124E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	1.60030412E-02	4.45132746E-01	1.60030412E-02
1.16200E+03	9.19496234E-01	2.74898307E+04	1.37489015E+04	1.60030687E-02	4.76589050E-01	1.57280907E-02
1.16400E+03	1.90413051E+00	5.49911266E+04	1.37524320E+04	1.60031512E-02	5.08045234E-01	1.57281025E-02
1.16600E+03	2.95167722E+00	8.24997092E+04	1.37561882E+04	1.60032887E-02	5.39501493E-01	1.57281649E-02
1.16800E+03	4.06213661E+00	1.10016030E+05	1.37601699E+04	1.60034812E-02	5.70957928E-01	1.57282778E-02
1.17000E+03	5.23550913E+00	1.37540539E+05	1.37643772E+04	1.60037287E-02	6.02414638E-01	1.57284412E-02
1.18000E+03	1.20460987E+01	2.75301713E+05	1.37887975E+04	1.60057928E-02	7.59705874E-01	1.57300168E-02
1.19000E+03	2.04297005E+01	4.13335290E+05	1.38188581E+04	1.60092357E-02	9.17019195E-01	1.57328585E-02
1.20000E+03	3.03865988E+01	5.51697679E+05	1.38545600E+04	1.60140606E-02	1.07436728E+00	1.57369694E-02
1.20600E+03	3.71160858E+01	6.34896412E+05	1.38786896E+04	1.60176203E-02	1.16879809E+00	1.57400465E-02
1.21000E+03	4.19218511E+01	5.74223745E+05	-1.51590799E+04	1.60192324E-02	1.23408531E+00	1.63224140E-02
1.21200E+03	4.44226669E+01	5.43914514E+05	-1.51501128E+04	1.60199778E-02	1.26673071E+00	1.63229801E-02
1.22000E+03	5.50788693E+01	4.22863951E+05	-1.51119035E+04	1.60225558E-02	1.39732228E+00	1.63247938E-02
1.23000E+03	6.98683575E+01	2.72005187E+05	-1.50588737E+04	1.60248717E-02	1.56057743E+00	1.63260492E-02
1.24000E+03	8.62904412E+01	1.21705990E+05	-1.49999899E+04	1.60261837E-02	1.72383953E+00	1.63261835E-02
1.24200E+03	8.97707725E+01	-1.45673633E-09	4.90698426E-09	1.60262954E-02	1.75648729E+00	1.60262954E-02

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Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
4.81071538E+01	2.31429825E+03	7.40336878E+02	7.36075008E+02	1.92111702E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	3.31035877E-02	-8.16779242E+00	3.31035877E-02
-3.70000E+01	-1.02067362E+02	-3.21562334E+04	-3.17039903E+03	3.30316270E-02	-7.49739192E+00	3.38884916E-02
-2.50000E+01	-1.89495760E+02	-8.09195407E+04	-4.93969338E+03	3.27030139E-02	-7.07400779E+00	3.56087159E-02
0.	-3.55163143E+02	-2.47258665E+05	-8.29207007E+03	3.09824685E-02	-6.18267646E+00	3.49310733E-02
2.50000E+01	-4.98921849E+02	-4.91824636E+05	-1.12008852E+04	2.87592414E-02	-5.32996099E+00	3.19594943E-02
5.00000E+01	-6.22338496E+02	-8.03881703E+05	-1.36979989E+04	2.70580178E-02	-4.55180091E+00	3.01020175E-02
7.50000E+01	-7.26958960E+02	-1.17355666E+06	-1.58148717E+04	2.56071814E-02	-3.82498262E+00	2.83817203E-02
1.00000E+02	-8.13874836E+02	-1.59163737E+06	-1.75732276E+04	2.37927942E-02	-3.13298914E+00	2.68758166E-02
1.25000E+02	-8.84034912E+02	-2.04938871E+06	-1.89923582E+04	2.14012717E-02	-2.48650104E+00	2.47332644E-02
1.50000E+02	-9.38781027E+02	-2.53865196E+06	-2.00994045E+04	1.83858575E-02	-1.90198488E+00	2.19120688E-02
1.75000E+02	-9.80133582E+02	-3.05210890E+06	-2.09357592E+04	1.67229774E-02	-1.41114195E+00	1.88165534E-02
2.00000E+02	-1.00974767E+03	-3.58345848E+06	-2.15344953E+04	1.47488484E-02	-9.63950183E-01	1.69022979E-02
2.25000E+02	-1.02882014E+03	-4.12705400E+06	-2.19198290E+04	1.24545305E-02	-5.68874234E-01	1.46465134E-02
2.50000E+02	-1.03878987E+03	-4.67791007E+06	-2.21209349E+04	1.01851288E-02	-2.41277614E-01	1.12917134E-02
2.75000E+02	-1.04157012E+03	-5.23189627E+06	-2.21766118E+04	8.55564449E-03	1.22940620E-02	9.14363442E-03
3.00000E+02	-1.03860339E+03	-5.78577456E+06	-2.21161448E+04	7.12707633E-03	2.20038931E-01	7.52598470E-03
3.25000E+02	-1.03091881E+03	-6.33690926E+06	-2.19602717E+04	5.82924778E-03	3.90395283E-01	6.12938532E-03
3.50000E+02	-1.01939495E+03	-6.88314152E+06	-2.17267456E+04	4.62389809E-03	5.27581271E-01	4.86293445E-03
3.75000E+02	-1.00489318E+03	-8.63549586E+06	-5.61169152E+03	3.27915531E-03	6.27863628E-01	3.33081942E-03
3.85000E+02	-9.98459651E+02	-8.69159364E+06	-5.60783238E+03	2.77488267E-03	6.58615875E-01	2.82339333E-03
4.00000E+02	-9.88298303E+02	-8.77401182E+06	-5.37916684E+03	2.10543994E-03	6.95752317E-01	2.14861143E-03
4.25000E+02	-9.70352206E+02	-8.90349214E+06	-4.97545621E+03	1.06972352E-03	7.36385055E-01	1.12734316E-03
4.50000E+02	-9.51715709E+02	-9.02265511E+06	-4.55621387E+03	-2.67092315E-05	7.50961293E-01	3.76440717E-05
4.75000E+02	-9.33060719E+02	-9.13129876E+06	-4.13648954E+03	-1.05993805E-03	7.38129488E-01	-1.00871217E-03
5.00000E+02	-9.15018067E+02	-9.22959640E+06	-3.73064891E+03	-1.82600368E-03	7.02697077E-01	-1.78500754E-03
5.25000E+02	-8.98079299E+02	-9.30445802E+06	3.46382162E+03	-2.40245892E-03	6.50250411E-01	-2.42734595E-03
5.50000E+02	-8.82695245E+02	-8.67630714E+06	4.60876345E+04	-2.98580283E-03	5.75910934E-01	-3.63492444E-03
5.75000E+02	-8.69575065E+02	-7.05225191E+06	8.26103320E+04	-3.62615836E-03	4.70114207E-01	-4.78968416E-03
5.77000E+02	-8.68644498E+02	-6.88443481E+06	8.51978085E+04	-3.67111819E-03	4.60453129E-01	-4.87108732E-03
6.00000E+02	-8.59428016E+02	-4.61495689E+06	1.10850626E+05	-4.10135771E-03	3.38782211E-01	-5.66263413E-03

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6.25000E+02	-8.52798564E+02	-1.59147652E+06	1.29302810E+05	-4.35471849E-03	1.89988600E-01	-6.17588482E-03
6.50000E+02	-8.50002242E+02	1.76102695E+06	1.37082182E+05	-4.34918876E-03	3.34076776E-02	-6.27992372E-03
6.75000E+02	-8.51172872E+02	5.17198102E+06	1.34019586E+05	-4.06911462E-03	-1.20436247E-01	-5.95658767E-03
7.00000E+02	-8.55899270E+02	8.37557692E+06	1.20647873E+05	-3.52059454E-03	-2.60967321E-01	-5.21986036E-03
7.25000E+02	-8.63933896E+02	1.11290332E+07	9.82678165E+04	-2.73035468E-03	-3.78348196E-01	-4.11440844E-03
7.50000E+02	-8.74520531E+02	1.32295856E+07	6.87810191E+04	-1.74319385E-03	-4.64205938E-01	-2.71194060E-03
7.75000E+02	-8.86794159E+02	1.45289560E+07	3.46137874E+04	-6.55302904E-04	-5.12021707E-01	-1.09906941E-03
8.00000E+02	-8.99766189E+02	1.49441803E+07	-1.49493559E+03	3.87161667E-04	-5.27588195E-01	4.04344835E-04
8.25000E+02	-9.12492763E+02	1.44599015E+07	-3.69308104E+04	1.34663669E-03	-4.93283692E-01	1.77112876E-03
8.50000E+02	-9.24132414E+02	1.31230516E+07	-6.93287807E+04	2.20767400E-03	-4.33872001E-01	2.96952873E-03
8.75000E+02	-9.33944031E+02	1.10360845E+07	-9.66346269E+04	2.91245879E-03	-3.48009442E-01	3.88856613E-03
9.00000E+02	-9.41352371E+02	8.34763412E+06	-1.16710697E+05	3.44074972E-03	-2.42359253E-01	4.53150390E-03
9.25000E+02	-9.45947516E+02	5.29055276E+06	-1.26686828E+05	3.78562908E-03	-1.24450460E-01	4.80729705E-03
9.50000E+02	-9.47528555E+02	2.06996194E+06	-1.29915166E+05	3.95321939E-03	-1.43721498E-03	5.00092234E-03
9.75000E+02	-9.45996988E+02	-1.15220859E+06	-1.26793122E+05	3.97378170E-03	1.23940828E-01	4.99630688E-03
9.91000E+02	-9.43379327E+02	-3.14163225E+06	-1.21454475E+05	3.91111877E-03	2.03140897E-01	4.89059034E-03
1.00000E+03	-9.41354804E+02	-4.21674510E+06	-1.17326194E+05	3.85086321E-03	2.46753268E-01	4.79704219E-03
1.02500E+03	-9.33726515E+02	-6.96767878E+06	-1.01766926E+05	3.59563904E-03	3.62249114E-01	4.39069315E-03
1.05000E+03	-9.23355810E+02	-9.25841402E+06	-8.06122921E+04	3.23787002E-03	4.65773779E-01	3.86765355E-03
1.07500E+03	-9.10577109E+02	-1.09573175E+07	-5.45481973E+04	2.79924962E-03	5.54300198E-01	3.20632572E-03
1.10000E+03	-8.95799937E+02	-1.19518189E+07	-2.44061033E+04	2.31503854E-03	6.25624293E-01	2.49318528E-03
1.12500E+03	-8.79457874E+02	-1.21496259E+07	9.52603585E+03	1.91227292E-03	6.79622216E-01	1.84937593E-03
1.13300E+03	-8.73964898E+02	-1.20248321E+07	2.17138279E+04	1.79583686E-03	6.93621875E-01	1.65107801E-03
1.16000E+03	-8.54736146E+02	-1.08432851E+07	6.22820927E+04	1.43370334E-03	7.27979729E-01	8.92119929E-04
1.19000E+03	-8.32536101E+02	-8.88557862E+06	7.89300196E+04	1.09425291E-03	7.49876759E-01	4.93130248E-04
1.20600E+03	-8.20485843E+02	-7.53420427E+06	8.90427032E+04	9.47152509E-04	7.56214388E-01	3.11133201E-04
1.21200E+03	-8.15950315E+02	-6.77642509E+06	1.26704457E+05	8.18990313E-04	7.55628283E-01	-2.50511061E-04
1.22500E+03	-8.06184041E+02	-5.11781230E+06	1.28463507E+05	5.85790489E-04	7.46875494E-01	-1.20280870E-03
1.24200E+03	-7.93874909E+02	-2.91480123E+06	1.30687895E+05	3.79216120E-04	6.89934543E-01	-6.88122249E-03
1.25000E+03	-7.88577485E+02	-1.86543307E+06	1.31640837E+05	3.21261500E-04	6.34421318E-01	-6.99211832E-03
1.26418E+03	-7.80291024E+02	1.21052066E+04	1.33131621E+05	2.81305377E-04	5.34290443E-01	-7.11489577E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-9.29487435E+00		
1.26418E+03	-7.80291024E+02	1.21052066E+04	-1.52793696E+03	2.81305377E-04	5.34290443E-01	3.66190763E-04
1.27500E+03	-7.74490254E+02	1.21171300E+03	-4.84464149E+02	2.81493581E-04	5.37940702E-01	3.08408256E-04
1.28000E+03	-7.71796863E+02	1.03817737E-07	-1.38723196E-09	2.81499736E-04	5.39415511E-01	2.81499736E-04

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.81071538E+01	2.31429825E+03	8.07512953E+00	1.23369997E+01	1.20027523E+01	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN.	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	8.95164839E-03	6.05369954E-01	8.95164839E-03
1.16200E+03	1.22494395E+00	3.36337268E+04	1.68258252E+04	8.95168201E-03	6.22600599E-01	8.61516551E-03
1.16400E+03	2.48737543E+00	6.72929117E+04	1.68333942E+04	8.95178294E-03	6.39830869E-01	8.61511505E-03
1.16600E+03	3.78426739E+00	1.00967441E+05	1.68411698E+04	8.95195120E-03	6.57061101E-01	8.61512780E-03
1.16800E+03	5.11561990E+00	1.34657729E+05	1.68491521E+04	8.95218682E-03	6.74291423E-01	8.61520378E-03
1.17000E+03	6.48143324E+00	1.68364187E+05	1.68573409E+04	8.95248984E-03	6.91521959E-01	8.61534302E-03
1.18000E+03	1.38274409E+01	3.37153510E+05	1.69013846E+04	8.95501706E-03	7.77682300E-01	8.61698937E-03
1.19000E+03	2.20351608E+01	5.06409101E+05	1.69505947E+04	8.95923446E-03	8.63867036E-01	8.62022257E-03
1.20000E+03	3.11049163E+01	6.76182633E+05	1.70049733E+04	8.96514697E-03	9.50092057E-01	8.62504750E-03
1.20600E+03	3.69607408E+01	7.78316869E+05	1.70400824E+04	8.96951036E-03	1.00185304E+00	8.62870871E-03
1.21000E+03	4.10430103E+01	7.00942502E+05	-1.93307159E+04	8.97148268E-03	1.03928258E+00	9.35809700E-03
1.21200E+03	4.31402921E+01	6.62293607E+05	-1.93181415E+04	8.97239150E-03	1.05799944E+00	9.35875433E-03
1.22000E+03	5.19037923E+01	5.07956251E+05	-1.92655991E+04	8.97551198E-03	1.13287835E+00	9.36082396E-03
1.23000E+03	6.37006451E+01	3.15649228E+05	-1.91948700E+04	8.97825694E-03	1.22649440E+00	9.36215434E-03
1.24000E+03	7.64337016E+01	1.24077561E+05	-1.91185278E+04	8.97972227E-03	1.32011680E+00	9.36209283E-03
1.24200E+03	7.90926592E+01	4.73823084E+08	9.83412329E-10	8.97983351E-03	1.33883507E+00	8.97983351E-03

120,3

t=20
Mode 4

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
6.25254776E+01	3.90942667E+03	7.40336878E+02	4.94207460E+02	4.73065666E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-8.05490773E-02	1.57765452E+01	-8.05490773E-02
-3.70000E+01	1.93740578E+02	1.94151878E+05	1.02285278E+04	-8.03155549E-02	1.41385917E+01	-8.30800219E-02
-2.50000E+01	3.57120548E+02	2.60834168E+05	1.58134219E+04	-7.92540981E-02	1.30880701E+01	-8.85561110E-02
0.	6.56479422E+02	7.88048477E+05	2.60471738E+04	-7.37413023E-02	1.08736403E+01	-8.61447184E-02
2.50000E+01	9.01780685E+02	1.54776658E+06	3.44311306E+04	-6.66994108E-02	8.78892551E+00	-7.65368767E-02
5.00000E+01	1.09817130E+03	2.49570097E+06	4.11404306E+04	-6.13810129E-02	6.94355672E+00	-7.05233308E-02
7.50000E+01	1.25038683E+03	3.59225459E+06	4.63451248E+04	-5.69070657E-02	5.26185418E+00	-6.50377894E-02
1.00000E+02	1.36212890E+03	4.80139509E+06	5.01625509E+04	-5.13953890E-02	3.69262814E+00	-6.01958366E-02
1.25000E+02	1.43637088E+03	6.08968097E+06	5.26972997E+04	-4.42371515E-02	2.26767402E+00	-5.34822917E-02
1.50000E+02	1.47731258E+03	7.42675462E+06	5.40929021E+04	-3.53485798E-02	1.03461213E+00	-4.48385627E-02
1.75000E+02	1.49097829E+03	8.78660084E+06	5.45578816E+04	-3.05237517E-02	7.35367982E-02	-3.59795399E-02
2.00000E+02	1.48221479E+03	1.01482506E+07	5.42557813E+04	-2.48880030E-02	-7.56963876E-01	-3.03135812E-02
2.25000E+02	1.45456222E+03	1.14940004E+07	5.33076185E+04	-1.84456793E-02	-1.43487889E+00	-2.37764412E-02
2.50000E+02	1.41216693E+03	1.28094136E+07	5.18554987E+04	-1.21746050E-02	-1.92340262E+00	-1.47686409E-02
2.75000E+02	1.36019930E+03	1.40840844E+07	5.00765301E+04	-7.74946177E-03	-2.21660214E+00	-9.07718918E-03
3.00000E+02	1.30247186E+03	1.53116130E+07	4.81013399E+04	-3.93584704E-03	-2.38837026E+00	-4.80344974E-03
3.25000E+02	1.24170199E+03	1.64882910E+07	4.60224422E+04	-5.29835110E-04	-2.46191577E+00	-1.15883746E-03
3.50000E+02	1.18018271E+03	1.76125256E+07	4.39181052E+04	2.58054975E-03	-2.44951906E+00	2.09736537E-03
3.75000E+02	1.12026955E+03	1.41101752E+07	-8.09532086E+04	5.00309816E-03	-2.33453253E+00	5.74839498E-03
3.85000E+02	1.09722913E+03	1.33005259E+07	-8.09765487E+04	5.80105407E-03	-2.27321813E+00	6.50154325E-03
4.00000E+02	1.06391251E+03	1.20763092E+07	-8.22423969E+04	6.77546543E-03	-2.16834584E+00	7.43551677E-03
4.25000E+02	1.01220942E+03	9.99529080E+06	-8.42065325E+04	8.07169978E-03	-1.96295080E+00	9.04687676E-03
4.50000E+02	9.66092126E+02	7.86775270E+06	-8.59584462E+04	9.16370661E-03	-1.72166611E+00	1.03778090E-02
4.75000E+02	9.26383878E+02	5.69940423E+06	-8.74669084E+04	9.94323369E-03	-1.45310440E+00	1.10264152E-02
5.00000E+02	8.93541270E+02	3.49658471E+06	-8.87144026E+04	1.03321584E-02	-1.17349162E+00	1.13070419E-02
5.25000E+02	8.67743231E+02	1.23375730E+06	-1.05732595E+05	1.04838794E-02	-8.90150298E-01	1.12435518E-02
5.50000E+02	8.49208834E+02	-2.56387996E+06	-1.92414797E+05	1.04346327E-02	-5.83348558E-01	1.31447002E-02
5.75000E+02	8.38790749E+02	-8.56792272E+06	-2.41365886E+05	1.00141552E-02	-2.49290560E-01	1.34136748E-02
5.77000E+02	8.38318974E+02	-8.55291229E+06	-2.43581723E+05	9.96054203E-03	-2.22484502E-01	1.33912705E-02
6.00000E+02	8.36690113E+02	-1.43052390E+07	-2.51194535E+05	9.11365749E-03	7.87063961E-02	1.26516087E-02

t=20.4

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TRAX SYSTEMS

6.25000E+02	8.42428206E+02	-2.03193388E+07	-2.24134981E+05	7.71294859E-03	3.74756458E-01	1.08697793E-02
6.50000E+02	8.54901225E+02	-2.52471075E+07	-1.65386635E+05	5.86570704E-03	6.14723873E-01	8.19509627E-03
6.75000E+02	8.72452346E+02	-2.83889555E+07	-8.27452776E+04	3.68906046E-03	7.78938418E-01	4.85448691E-03
7.00000E+02	8.93013477E+02	-2.92660266E+07	1.40569391E+04	1.34798015E-03	8.54402146E-01	1.14999509E-03
7.25000E+02	9.14291954E+02	-2.76579868E+07	1.14230315E+05	-9.64191607E-04	8.36280668E-01	-2.57306929E-03
7.50000E+02	9.33984015E+02	-2.36170591E+07	2.06932484E+05	-3.04732502E-03	7.28542657E-01	-5.96186704E-03
7.75000E+02	9.50011529E+02	-1.74563334E+07	2.82336533E+05	-4.66864762E-03	5.46276849E-01	-8.28834676E-03
8.00000E+02	9.60871423E+02	-9.70330066E+06	3.33424246E+05	-5.63547305E-03	3.18562218E-01	-9.46793565E-03
8.25000E+02	9.65780639E+02	-1.01866586E+06	3.56522287E+05	-5.98671507E-03	7.22855981E-02	-1.00846724E-02
8.50000E+02	9.64488973E+02	7.87866966E+06	3.50443027E+05	-5.77438847E-03	-1.74189616E-01	-9.62541074E-03
8.75000E+02	9.57283122E+02	1.62705668E+07	3.16552679E+05	-5.07379498E-03	-3.97306791E-01	-8.27129679E-03
9.00000E+02	9.44961809E+02	2.35081588E+07	2.60732233E+05	-3.99410705E-03	-5.80971688E-01	-6.43085690E-03
9.25000E+02	9.28637935E+02	2.92968446E+07	2.01214330E+05	-2.67112546E-03	-7.15986133E-01	-4.29382167E-03
9.50000E+02	9.09620135E+02	3.35224423E+07	1.35637044E+05	-1.23720023E-03	-7.99317902E-01	-2.33104735E-03
9.75000E+02	8.89158166E+02	3.60370496E+07	6.50777274E+04	3.50383606E-04	-8.30920361E-01	-1.74436777E-04
9.91000E+02	8.75919768E+02	3.67124713E+07	1.94292626E+04	1.41032791E-03	-8.22307801E-01	1.25364031E-03
1.00000E+03	8.68586088E+02	3.67732619E+07	-5.84323991E+03	2.01188475E-03	-8.07398839E-01	2.05900765E-03
1.02500E+03	8.49301678E+02	3.57817782E+07	-7.23403764E+04	3.66487983E-03	-7.28339846E-01	4.23003902E-03
1.05000E+03	8.32651211E+02	3.32319792E+07	-1.29766572E+05	5.18359051E-03	-5.97580389E-01	6.19739185E-03
1.07500E+03	8.19847225E+02	2.94042739E+07	-1.73922945E+05	6.54054879E-03	-4.21523506E-01	7.83848122E-03
1.10000E+03	8.11924299E+02	2.46761425E+07	-2.01266641E+05	7.68101119E-03	-2.08320426E-01	9.15011076E-03
1.12500E+03	8.09625245E+02	1.95028777E+07	-2.09208074E+05	8.41797951E-03	2.71728962E-02	9.79930533E-03
1.13300E+03	8.10159190E+02	1.78356212E+07	-2.07210773E+05	8.59773988E-03	1.06313298E-01	9.97914503E-03
1.16000E+03	8.16765605E+02	1.25028282E+07	-1.84927818E+05	9.07331444E-03	3.85657485E-01	1.06813824E-02
1.19000E+03	8.33660586E+02	3.11903624E+06	-2.94004487E+05	9.33712721E-03	7.39044327E-01	1.15762342E-02
1.20600E+03	8.46952812E+02	-1.42698192E+06	-2.75350314E+05	9.35189237E-03	9.22200826E-01	1.13186803E-02
1.21200E+03	8.52651793E+02	-1.32686345E+06	1.75606278E+04	9.32721556E-03	9.77459625E-01	9.17898782E-03
1.22500E+03	8.66126946E+02	-1.07246277E+06	2.16557948E+04	9.28001466E-03	1.09564074E+00	8.97850072E-03
1.24200E+03	8.86003572E+02	-6.54014075E+05	2.76989712E+04	9.23520896E-03	1.24026858E+00	7.69637723E-03
1.25000E+03	8.96169057E+02	-4.20164904E+05	3.07879659E+04	9.22213936E-03	1.30110259E+00	7.51169681E-03
1.26418E+03	9.15358133E+02	5.72259939E+04	3.66198182E+04	9.21403392E-03	1.40526906E+00	7.17959958E-03
1.26418000E+03	TOTAL DEFECTION OF THE SPRING MASS SYSTEM = -1.78707577E+00					
1.26418E+03	9.15358133E+02	5.72259939E+04	-7.11530587E+03	9.21403392E-03	1.40526906E+00	9.60932869E-03
1.27500E+03	9.31117976E+02	5.84443688E+03	-2.32602681E+03	9.21492983E-03	1.50782579E+00	9.34415354E-03
1.28000E+03	9.38773104E+02	-1.04304306E-05	-5.14917606E-08	9.21495958E-03	1.55422525E+00	9.21495958E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
6.25254076E+01	3.90942660E+03	8.07512953E+00	2.54204547E+02	2.25171798E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	8.34452811E-02	-8.45922521E-01	8.34452811E-02
1.16200E+03	-1.52643843E+00	2.85654364E+05	1.42807288E+05	8.34455668E-02	-6.84744855E-01	8.05894211E-02
1.16400E+03	-2.73474860E+00	5.71256157E+05	1.42795050E+05	8.34464237E-02	-5.23564996E-01	8.05905227E-02
1.16600E+03	-3.62069648E+00	8.56836739E+05	1.42786077E+05	8.34478518E-02	-3.62382427E-01	8.05921303E-02
1.16800E+03	-4.18427565E+00	1.14240264E+06	1.42780369E+05	8.34498511E-02	-2.01196137E-01	8.05942437E-02
1.17000E+03	-4.42547765E+00	1.42796039E+06	1.42777926E+05	8.34524214E-02	-4.00051150E-02	8.05968629E-02
1.18000E+03	-7.95392486E-01	2.85585545E+06	1.42814692E+05	8.34738402E-02	7.66056393E-01	8.06175464E-02
1.19000E+03	1.08965534E+01	4.28452639E+06	1.42933108E+05	8.35095411E-02	1.57238798E+00	8.06508790E-02
1.20000E+03	3.06536934E+01	5.71478989E+06	1.43133209E+05	8.35595360E-02	2.37911617E+00	8.06968718E-02
1.20600E+03	4.63811312E+01	6.57405230E+06	1.43292498E+05	8.35964021E-02	2.86339616E+00	8.07305521E-02
1.21000E+03	5.85268418E+01	5.99143706E+06	-1.45588415E+05	8.36131559E-02	3.20946810E+00	8.65249243E-02
1.21200E+03	6.51188326E+01	5.70032641E+06	-1.45521651E+05	8.36209504E-02	3.38252448E+00	8.65313835E-02
1.22000E+03	9.49482802E+01	4.53732426E+06	-1.45219537E+05	8.36482498E-02	4.07486546E+00	8.65526405E-02
1.23000E+03	1.40024887E+02	3.08733851E+06	-1.44762999E+05	8.36736628E-02	4.94048280E+00	8.65689228E-02
1.24000E+03	1.93758290E+02	1.64235652E+06	-1.44218785E+05	8.36894254E-02	5.80620590E+00	8.65738011E-02
1.24200E+03	2.05543849E+02	-3.65139671E-07	-6.89452658E-07	8.36909709E-02	5.97930981E+00	8.36909709E-02

t20,4

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t=20
Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
7.28044578E+01	5.30048907E+03	7.40336878E+02	3.87469409E+02	3.66747961E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	V/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-8.38312670E-02	1.43991018E+01	-8.38312670E-02
-3.70000E+01	1.74693689E+02	1.28230892E+05	1.25588974E+04	-8.35433744E-02	1.26892725E+01	-8.69376710E-02
-2.50000E+01	3.20312884E+02	3.20054716E+05	1.93090692E+04	-8.22390052E-02	1.15805933E+01	-9.35972812E-02
0.	5.80420583E+02	9.59137626E+05	3.13642019E+04	-7.55035130E-02	9.24270090E+00	-9.04388473E-02
2.50000E+01	7.83721886E+02	1.86628857E+06	4.07844549E+04	-6.69716889E-02	7.06857705E+00	-7.86243903E-02
5.00000E+01	9.36511823E+02	2.97893181E+06	4.78631454E+04	-6.05903239E-02	5.18723302E+00	-7.12265784E-02
7.50000E+01	1.04482380E+03	4.24228604E+06	5.28815823E+04	-5.52771216E-02	3.50498719E+00	-6.45545922E-02
1.00000E+02	1.11291399E+03	5.60745519E+06	5.60336383E+04	-4.88056640E-02	1.96070556E+00	-5.86361269E-02
1.25000E+02	1.14449624E+03	7.02983855E+06	5.74924294E+04	-4.04956469E-02	5.90998100E-01	-5.05820380E-02
1.50000E+02	1.14460484E+03	8.46989140E+06	5.74912642E+04	-3.02984443E-02	-5.50517266E-01	-4.03846310E-02
1.75000E+02	1.12020701E+03	9.89500883E+06	5.63571515E+04	-2.48312917E-02	-1.38391826E+00	-3.04670068E-02
2.00000E+02	1.07682780E+03	1.12804053E+07	5.43427804E+04	-1.85265846E-02	-2.06614959E+00	-2.39608627E-02
2.25000E+02	1.01853038E+03	1.26063741E+07	5.16364876E+04	-1.14140653E-02	-2.57464906E+00	-1.65777141E-02
2.50000E+02	9.49978225E+02	1.38582474E+07	4.84550756E+04	-4.57927607E-03	-2.87445878E+00	-7.00320815E-03
2.75000E+02	8.76697465E+02	1.50273532E+07	4.50551730E+04	1.76145698E-04	-2.96968570E+00	-1.01844562E-03
3.00000E+02	8.02688167E+02	1.61107443E+07	4.16224530E+04	4.21752388E-03	-2.93718137E+00	3.46678070E-03
3.25000E+02	7.30800813E+02	1.71093049E+07	3.82885090E+04	7.77688060E-03	-2.80206441E+00	7.25358021E-03
3.50000E+02	6.63418137E+02	1.80269157E+07	3.51636092E+04	1.09826129E-02	-2.57817689E+00	1.05957449E-02
3.75000E+02	6.02979808E+02	5.74501925E+06	-1.42329953E+05	1.22741290E-02	-2.25150172E+00	1.35844917E-02
3.85000E+02	5.81149258E+02	4.32156825E+06	-1.42359932E+05	1.25674525E-02	-2.11451699E+00	1.37989398E-02
4.00000E+02	5.50994841E+02	2.17432124E+06	-1.43912841E+05	1.28192461E-02	-1.90596428E+00	1.39742448E-02
4.25000E+02	5.07771172E+02	-1.45227468E+06	-1.46138590E+05	1.28664839E-02	-1.55095068E+00	1.45588822E-02
4.50000E+02	4.73507737E+02	-5.12875764E+06	-1.47902737E+05	1.24629874E-02	-1.18949712E+00	1.45520091E-02
4.75000E+02	4.48204681E+02	-8.84354770E+06	-1.49205097E+05	1.16795567E-02	-8.38248043E-01	1.35272978E-02
5.00000E+02	4.31350274E+02	-1.25853867E+07	-1.50072467E+05	1.07938703E-02	-5.13912642E-01	1.24430182E-02
5.25000E+02	4.22259851E+02	-1.63555620E+07	-1.56252938E+05	9.90069607E-03	-2.17356468E-01	1.10233494E-02
5.50000E+02	4.20315239E+02	-2.05070419E+07	-1.68430549E+05	8.69231410E-03	6.50234422E-02	1.10645754E-02
5.75000E+02	4.25157397E+02	-2.44131048E+07	-1.37408163E+05	6.87578882E-03	3.15297553E-01	8.81111506E-03
5.77000E+02	4.25805398E+02	-2.46838310E+07	-1.33281138E+05	6.71740717E-03	3.32704086E-01	8.59460631E-03
6.00000E+02	4.35462967E+02	-2.70864018E+07	-7.15716305E+04	4.78811047E-03	4.99198807E-01	5.79616160E-03

t=20, 504

6.25000E+02	4.49353884E+02	-2.78001663E+07	1.71788278E+04	2.56000719E-03	6.71223748E-01	2.31805187E-03
6.50000E+02	4.64687236E+02	-2.61507079E+07	1.15123793E+05	3.68088829E-04	6.14315933E-01	-1.25337305E-03
6.75000E+02	4.79256725E+02	-2.20850616E+07	2.08180236E+05	-1.59255767E-03	5.41063723E-01	-4.52467367E-03
7.00000E+02	4.91041920E+02	-1.58907077E+07	2.83451836E+05	-3.13650110E-03	3.93664224E-01	-7.12876640E-03
7.25000E+02	4.98434655E+02	-8.14744407E+06	3.30669593E+05	-4.11372382E-03	1.92673965E-01	-8.77104203E-03
7.50000E+02	5.00420734E+02	3.53663018E+05	3.43362083E+05	-4.43012277E-03	-3.52878717E-02	-9.26620845E-03
7.75000E+02	4.96700255E+02	8.71537311E+06	3.19638566E+05	-4.08000877E-03	-2.57786980E-01	-8.17793910E-03
8.00000E+02	4.87861668E+02	1.60632605E+07	2.63262710E+05	-3.20278815E-03	-4.42524606E-01	-6.22879631E-03
8.25000E+02	4.75090973E+02	2.16691002E+07	1.81756418E+05	-1.96667242E-03	-5.72336797E-01	-4.05582665E-03
8.50000E+02	4.59819772E+02	2.50179711E+07	8.43438542E+04	-5.04729105E-04	-6.40635455E-01	-1.43158465E-03
8.75000E+02	4.43660720E+02	2.58391887E+07	-1.87078758E+04	9.82041600E-04	-6.43162870E-01	1.17101014E-03
9.00000E+02	4.28205423E+02	2.41236043E+07	-1.14294878E+05	2.34625055E-03	-5.84774466E-01	3.41442698E-03
9.25000E+02	4.14845750E+02	2.03999931E+07	-1.80528431E+05	3.47058928E-03	-4.78382135E-01	4.92646372E-03
9.50000E+02	4.04576419E+02	1.52527145E+07	-2.28548916E+05	4.28542857E-03	-3.39433756E-01	6.12856499E-03
9.75000E+02	3.98111171E+02	9.12111259E+06	-2.58784223E+05	4.84224428E-03	-1.75308323E-01	6.92921383E-03
9.91000E+02	3.96210637E+02	4.89816207E+06	-2.67674485E+05	5.04650528E-03	-6.19785947E-02	7.20517048E-03
1.00000E+03	3.95946272E+02	2.48147390E+06	-2.68910974E+05	5.10689925E-03	3.23078082E-03	7.27553614E-03
1.02500E+03	3.98298522E+02	-4.14806732E+06	-2.57923492E+05	5.06823732E-03	1.84444187E-01	7.08326460E-03
1.05000E+03	4.05068008E+02	-1.02422419E+07	-2.26283992E+05	4.74976748E-03	3.55337288E-01	6.51761116E-03
1.07500E+03	4.15879500E+02	-1.53044099E+07	-1.75757078E+05	4.19429351E-03	5.06089884E-01	5.50591349E-03
1.10000E+03	4.30113633E+02	-1.88965265E+07	-1.09226504E+05	3.46990005E-03	6.28690383E-01	4.26717380E-03
1.12500E+03	4.47003587E+02	-2.06590569E+07	-2.88557790E+04	2.80780519E-03	7.18503762E-01	2.99832954E-03
1.13300E+03	4.52841240E+02	-2.07718281E+07	8.14759645E+02	2.60820923E-03	7.40909448E-01	2.60277750E-03
1.16000E+03	4.73594003E+02	-1.92838321E+07	1.01030479E+05	1.97200958E-03	7.90889149E-01	1.09348368E-03
1.19000E+03	4.96668347E+02	-7.29532383E+06	4.31832328E+05	1.51129178E-03	7.44800600E-01	-1.77749747E-03
1.20600E+03	5.08353702E+02	-1.87644535E+05	4.54340144E+05	1.44371126E-03	7.15870071E-01	-1.80157548E-03
1.21200E+03	5.12675444E+02	-2.12126230E+05	-3.18827220E+03	1.44011528E-03	7.24710490E-01	1.46702721E-03
1.22500E+03	5.22218968E+02	-2.28126507E+05	7.43497300E+02	1.43131885E-03	7.43523882E-01	1.42096712E-03
1.24200E+03	5.35052910E+02	-1.70759951E+05	6.03176573E+03	1.42068298E-03	7.65719741E-01	1.08558489E-03
1.25000E+03	5.41211096E+02	-1.12374782E+05	8.56897910E+03	1.41721021E-03	7.73826752E-01	9.41155818E-04
1.26418E+03	5.52266433E+02	4.13541786E+04	1.31247556E+04	1.41545100E-03	7.85362002E-01	6.86297913E-04
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-5.52303548E-01		
1.26418E+03	5.52266433E+02	4.13541786E+04	-5.20126245E+03	1.41545100E-03	7.85362002E-01	1.70441003E-03
1.27500E+03	5.60858109E+02	4.15900060E+03	-1.66109035E+03	1.41609502E-03	8.02748166E-01	1.50837781E-03
1.28000E+03	5.64890129E+02	4.72324437E-13	9.71782009E-16	1.41611615E-03	8.10059776E-01	1.41611615E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
7.28044578E+01	5.30048907E+03	8.07512953E+00	3.60942599E+02	3.01767724E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-1.19078194E-01	2.92167594E+00	-1.19078194E-01
1.16200E+03	5.59988764E+00	-4.64896918E+05	-2.32352275E+05	-1.19078659E-01	2.69281718E+00	-1.14431613E-01
1.16400E+03	1.07566569E+01	-9.29529609E+05	-2.32281463E+05	-1.19080053E-01	2.46395128E+00	-1.14434424E-01
1.16600E+03	1.54556882E+01	-1.39402696E+06	-2.32216937E+05	-1.19082377E-01	2.23507895E+00	-1.14438038E-01
1.16800E+03	1.96969670E+01	-1.85840155E+06	-2.32158697E+05	-1.19085629E-01	2.03619859E+00	-1.14442455E-01
1.17000E+03	2.34804757E+01	-2.32266594E+06	-2.32106742E+05	-1.19089810E-01	1.77730860E+00	-1.14447676E-01
1.18000E+03	3.55306237E+01	-4.64277502E+06	-2.31941271E+05	-1.19124639E-01	6.32657865E-01	-1.14485814E-01
1.19000E+03	3.61320222E+01	-6.96201540E+06	-2.31933013E+05	-1.19182663E-01	-5.12474510E-01	-1.14544003E-01
1.20000E+03	2.52788522E+01	-9.28195959E+06	-2.32082047E+05	-1.19263882E-01	-1.65828902E+00	-1.14622241E-01
1.20600E+03	1.32655862E+01	-1.06749184E+07	-2.32247011E+05	-1.19323752E-01	-2.34618856E+00	-1.14678812E-01
1.21000E+03	2.89022938E+00	-9.77660287E+06	2.24502362E+05	-1.19351020E-01	-2.84150521E+00	-1.23841068E-01
1.21200E+03	-3.04047125E+00	-9.32767845E+06	2.24420923E+05	-1.19363756E-01	-3.08919858E+00	-1.23852175E-01
1.22000E+03	-3.17177584E+01	-7.53381366E+06	2.24027131E+05	-1.19408719E-01	-4.08017216E+00	-1.23889262E-01
1.23000E+03	-7.87145187E+01	-5.29662732E+06	2.23381779E+05	-1.19451484E-01	-5.31922932E+00	-1.23919119E-01
1.24000E+03	-1.38103037E+02	-3.06674528E+06	2.22566266E+05	-1.19479357E-01	-6.55849356E+00	-1.23930682E-01
1.24200E+03	-1.51467885E+02	1.08046346E-13	5.23738439E-09	-1.19482274E-01	-6.80628816E+00	-1.19482274E-01

\$AS001

40 SECOND BURN

N=5, WDSQ=0., DWDS=10.,

H=0., CODEI=1, CODEII=1,

P=0, ACC=0., BEAM=2.,

OUTST=-57., -37., -25., 0.,

25., 50., 75., 100., 125., 150., 175.,

200., 225., 250., 275., 300., 325.,

350., 375., 385., 400., 425., 450.,

475., 500., 525., 550., 575., 577.,

600., 625., 650., 675., 700., 725.,

750., 775., 800., 825., 850., 875., 900.,

925., 950., 975., 991., 1000., 1025.,

1050., 1075., 1100., 1125., 1133., 1160., 1190.,

t=40
Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
2.02426895E+01	4.09766477E+02	6.55523083E+02	6.45009884E+02	5.81779054E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-2.47112753E-02	1.20999066E+01	-2.47112753E-02
-3.70000E+01	1.56150472E+02	8.55199320E+03	8.49270232E+02	-2.46922050E-02	1.16034654E+01	-2.49217375E-02
-2.50000E+01	2.93571465E+02	2.17104302E+04	1.34162751E+03	-2.46043718E-02	1.12998668E+01	-2.53935644E-02
0.	5.68112667E+02	6.76652972E+04	2.32526305E+03	-2.41378300E-02	1.06642781E+01	-2.52450981E-02
2.50000E+01	8.26854562E+02	1.37501650E+05	3.25227821E+03	-2.35229650E-02	1.00382808E+01	-2.44521873E-02
5.00000E+01	1.07020944E+03	2.29820241E+05	4.12416065E+03	-2.30421033E-02	9.43241915E+00	-2.39585835E-02
7.50000E+01	1.29859708E+03	3.43262868E+05	4.94242244E+03	-2.26227507E-02	8.84057263E+00	-2.34898424E-02
1.00000E+02	1.51231324E+03	4.76503203E+05	5.70810649E+03	-2.20855298E-02	8.25797835E+00	-2.30869520E-02
1.25000E+02	1.71161290E+03	6.28237552E+05	6.42212978E+03	-2.13606839E-02	7.68786464E+00	-2.24873734E-02
1.50000E+02	1.89687230E+03	7.97190261E+05	7.08583924E+03	-2.04247218E-02	7.13544307E+00	-2.16678515E-02
1.75000E+02	2.06870603E+03	9.82129096E+05	7.70146365E+03	-1.98959259E-02	6.61271174E+00	-2.06660723E-02
2.00000E+02	2.22763124E+03	1.18187791E+06	8.27083378E+03	-1.92525822E-02	6.10313279E+00	-2.00796656E-02
2.25000E+02	2.37401498E+03	1.39529620E+06	8.79526428E+03	-1.84862164E-02	5.60979131E+00	-1.93657429E-02
2.50000E+02	2.50831707E+03	1.62128002E+06	9.27640380E+03	-1.77100601E-02	5.13891330E+00	-1.81741058E-02
2.75000E+02	2.63121095E+03	1.85877628E+06	9.71667124E+03	-1.71384333E-02	4.69497693E+00	-1.73960608E-02
3.00000E+02	2.74322096E+03	2.10678881E+06	1.01179530E+04	-1.66247029E-02	4.26764605E+00	-1.68072002E-02
3.25000E+02	2.84472194E+03	2.36436023E+06	1.04815864E+04	-1.61463881E-02	3.85403808E+00	-1.62896431E-02
3.50000E+02	2.93603943E+03	2.63056413E+06	1.08087362E+04	-1.56912643E-02	3.45285071E+00	-1.58101814E-02
3.75000E+02	3.01743753E+03	4.30797473E+06	2.91758289E+04	-1.50755856E-02	3.06098982E+00	-1.53441933E-02
3.85000E+02	3.04728648E+03	4.59974900E+06	2.91789974E+04	-1.48164069E-02	2.90892420E+00	-1.50688204E-02
4.00000E+02	3.08924510E+03	5.03870320E+06	2.93460096E+04	-1.44474833E-02	2.68583494E+00	-1.46830051E-02
4.25000E+02	3.15186564E+03	5.77554386E+06	2.95952708E+04	-1.38147987E-02	2.32582630E+00	-1.41575349E-02
4.50000E+02	3.20567167E+03	6.51817423E+06	2.98094385E+04	-1.30627276E-02	1.98074694E+00	-1.34837648E-02
4.75000E+02	3.25107795E+03	7.26573680E+06	2.99901552E+04	-1.22804280E-02	1.65443355E+00	-1.26518231E-02
5.00000E+02	3.28856676E+03	8.01741956E+06	3.01393670E+04	-1.16443640E-02	1.34696008E+00	-1.19755658E-02
5.25000E+02	3.31856631E+03	8.77245684E+06	3.02587721E+04	-1.11236656E-02	1.05499480E+00	-1.13410702E-02
5.50000E+02	3.34142705E+03	9.53012161E+06	3.03497497E+04	-1.05291861E-02	7.74569129E-01	-1.09566473E-02
5.75000E+02	3.35745940E+03	1.02897174E+07	3.04135308E+04	-9.73000971E-03	5.10503029E-01	-1.01583693E-02
5.77000E+02	3.35846015E+03	1.03505484E+07	3.04175146E+04	-9.66342821E-03	4.90252750E-01	-1.00918439E-02
6.00000E+02	3.36714329E+03	1.10549021E+07	3.15593654E+04	-8.86948457E-03	2.67103893E-01	-9.31398267E-03

t 40, 167

6.25000E+02	3.37101284E+03	1.18733150E+07	3.34585449E+04	-7.94527829E-03	4.52547996E-02	-8.41652540E-03
6.50000E+02	3.36962883E+03	1.27062611E+07	3.27707077E+04	-6.95405024E-03	-1.52858486E-01	-7.41560951E-03
6.75000E+02	3.36361648E+03	1.34928479E+07	2.98036788E+04	-5.89713548E-03	-3.24709236E-01	-6.31690560E-03
7.00000E+02	3.35366176E+03	1.41802584E+07	2.48952432E+04	-4.78045911E-03	-4.67976569E-01	-5.13109634E-03
7.25000E+02	3.34050484E+03	1.47244621E+07	1.84098771E+04	-3.61385591E-03	-5.80661835E-01	-3.87314995E-03
7.50000E+02	3.32493072E+03	1.50908276E+07	1.07341633E+04	-2.41033619E-03	-6.61185904E-01	-2.56152159E-03
7.75000E+02	3.30775233E+03	1.52546061E+07	2.27103422E+03	-1.22464614E-03	-7.08572529E-01	-1.25376197E-03
8.00000E+02	3.28978298E+03	1.52011497E+07	-6.58104535E+03	-1.51428738E-04	-7.24945349E-01	-7.57845381E-05
8.25000E+02	3.27176310E+03	1.49253457E+07	-1.54593340E+04	8.27905752E-04	-7.13281907E-01	1.00559925E-03
8.50000E+02	3.25436047E+03	1.44307406E+07	-2.40317474E+04	1.74079484E-03	-6.75586993E-01	2.00487997E-03
8.75000E+02	3.23819897E+03	1.37288724E+07	-3.19921665E+04	2.55864513E-03	-6.14377165E-01	2.88179832E-03
9.00000E+02	3.22382640E+03	1.28386772E+07	-3.88654544E+04	3.27902586E-03	-5.32598326E-01	3.64225440E-03
9.25000E+02	3.21172313E+03	1.18063412E+07	-4.35029927E+04	3.89709163E-03	-4.33381606E-01	4.24792222E-03
9.50000E+02	3.20228088E+03	1.06740082E+07	-4.69136017E+04	4.40833175E-03	-3.20324842E-01	4.78666725E-03
9.75000E+02	3.19582625E+03	9.46965396E+06	-4.92455811E+04	4.86636318E-03	-1.94564545E-01	5.26350497E-03
9.91000E+02	3.19340222E+03	8.67405011E+06	-5.01217312E+04	5.13030556E-03	-1.08144182E-01	5.53451307E-03
1.00000E+03	3.19265595E+03	8.22161799E+06	-5.03914301E+04	5.26854615E-03	-5.76951519E-02	5.67492865E-03
1.02500E+03	3.19302875E+03	6.96074454E+06	-5.02583789E+04	5.61314165E-03	8.86063933E-02	6.00578524E-03
1.05000E+03	3.19715371E+03	5.71999158E+06	-4.87708208E+04	5.89109210E-03	2.42216103E-01	6.27211414E-03
1.07500E+03	3.20519208E+03	4.53398499E+06	-4.58703037E+04	6.11240006E-03	4.01403785E-01	6.45471575E-03
1.10000E+03	3.21726132E+03	3.43860527E+06	-4.15147476E+04	6.27986293E-03	5.64511337E-01	6.58289028E-03
1.12500E+03	3.23342904E+03	2.47086345E+06	-3.55660519E+04	6.37807883E-03	7.29127916E-01	6.61290870E-03
1.13300E+03	3.23947383E+03	2.19572119E+06	-3.31917889E+04	6.40053417E-03	7.82070155E-01	6.62181276E-03
1.16000E+03	3.26300980E+03	1.42405047E+06	-2.44687353E+04	6.45689083E-03	9.61523855E-01	6.66966244E-03
1.19000E+03	3.29485817E+03	7.32058635E+05	-1.95311177E+04	6.49305087E-03	1.16148258E+00	6.64179779E-03
1.20600E+03	3.31429087E+03	4.44433679E+05	-1.66550073E+04	6.50350813E-03	1.26758495E+00	6.62247247E-03
1.21200E+03	3.32201473E+03	3.92283209E+05	-8.56812628E+03	6.51099892E-03	1.30703325E+00	6.58332173E-03
1.22500E+03	3.33956443E+03	2.84491804E+05	-8.00924214E+03	6.52423977E-03	1.39292056E+00	6.63575256E-03
1.24200E+03	3.36421453E+03	1.54918822E+05	-7.22430633E+03	6.53547393E-03	1.50769829E+00	6.93682428E-03
1.25000E+03	3.37649780E+03	9.86797189E+04	-6.83311614E+03	6.53854137E-03	1.56311965E+00	6.91815893E-03
1.26418E+03	3.39935660E+03	6.89547731E+03	-6.10511181E+03	6.54077626E-03	1.66095580E+00	6.87994914E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			2.04359019E+00		
1.26418E+03	3.39935660E+03	6.89547731E+03	-8.63020650E+02	6.54077626E-03	1.66095580E+00	6.58872185E-03
1.27500E+03	3.41771288E+03	6.98211541E+02	-2.78415638E+02	6.54088389E-03	1.73207206E+00	6.55635142E-03
1.28000E+03	3.42645510E+03	4.59951504E-13	7.98608764E-14	6.54088744E-03	1.76481528E+00	6.54088744E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.02426895E+01	4.09766477E+02	8.07512953E+00	1.85883287E+01	1.82959700E+01	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	8.39244925E-03	9.37008791E-01 8.39244925E-03
1.16200E+03	1.88597677E+01	7.03663696E+03	3.52076736E+03	8.39245629E-03	9.53652961E-01 8.32204094E-03
1.16400E+03	3.87992676E+00	1.40802082E+04	3.52280977E+03	8.39247740E-03	9.70297021E-01 8.32202121E-03
1.16600E+03	5.76716484E+00	2.11278996E+04	3.52488752E+03	8.39251261E-03	9.86941055E-01 8.32201486E-03
1.16800E+03	7.75769098E+00	2.81797819E+04	3.52707061E+03	8.39256192E-03	1.00358509E+00 8.32202190E-03
1.17000E+03	9.78150522E+00	3.52359256E+04	3.52914903E+03	8.39262533E-03	1.02022915E+00 8.32204235E-03
1.18000E+03	2.03999025E+01	7.05830406E+04	3.54042121E+03	8.39315433E-03	1.10345081E+00 8.32234591E-03
1.19000E+03	3.18505372E+01	1.06047295E+05	3.55257688E+03	8.39403738E-03	1.18667719E+00 8.32298585E-03
1.20000E+03	4.41334734E+01	1.41637523E+05	3.56561609E+03	8.39527570E-03	1.26991166E+00 8.32396338E-03
1.20600E+03	5.19027790E+01	1.63055804E+05	3.57386376E+03	8.39618975E-03	1.31985762E+00 8.32471248E-03
1.21000E+03	5.72500458E+01	1.46418789E+05	-4.15627215E+03	8.39660238E-03	1.35377596E+00 8.47972782E-03
1.21200E+03	5.99745573E+01	1.38109131E+05	-4.15337989E+03	8.39679207E-03	1.37073555E+00 8.47985966E-03
1.22000E+03	7.12118021E+01	1.04929424E+05	-4.14145075E+03	8.39744013E-03	1.43857619E+00 8.48026914E-03
1.23000E+03	8.60215828E+01	6.35927745E+04	-4.12572912E+03	8.39800178E-03	1.52338036E+00 8.48051636E-03
1.24000E+03	1.01679413E+02	2.24178426E+04	-4.10910722E+03	8.39828839E-03	1.60818554E+00 8.48047053E-03
1.24200E+03	1.04912745E+02	-6.19159517E-12	-5.57388211E-11	8.39830805E-03	1.62514521E+00 8.39830805E-03

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Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
3.98875762E+01	1.59101873E+03	6.55523083E+02	6.43045518E+02	4.30330321E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	4.24720426E-02	-1.21844856E+01	4.24720426E-02
-3.70000E+01	-1.53674034E+02	-3.31080111E+04	-3.27101068E+03	4.23980272E-02	-1.13264688E+01	4.32820841E-02
-2.50000E+01	-2.86371440E+02	-8.35262416E+04	-5.11710157E+03	4.20591999E-02	-1.07897656E+01	4.50692597E-02
0.	-5.41969828E+02	-2.56719741E+05	-8.67281930E+03	4.02776857E-02	-9.66137462E+00	4.44075996E-02
2.50000E+01	-7.69732515E+02	-5.13937479E+05	-1.18411446E+04	3.79620795E-02	-8.57196995E+00	4.13452637E-02
5.00000E+01	-9.71268650E+02	-8.45743054E+05	-1.46445725E+04	3.61784512E-02	-7.55967800E+00	3.94328007E-02
7.50000E+01	-1.14817988E+03	-1.24331250E+06	-1.71055096E+04	3.46469545E-02	-6.60067192E+00	3.76479211E-02
1.00000E+02	-1.30159692E+03	-1.69829319E+06	-1.92394290E+04	3.27175368E-02	-5.67754718E+00	3.60928752E-02
1.25000E+02	-1.43250079E+03	-2.20267122E+06	-2.10600392E+04	3.01561029E-02	-4.80175649E+00	3.38508467E-02
1.50000E+02	-1.54229643E+03	-2.74884506E+06	-2.25868744E+04	2.69027111E-02	-3.99120396E+00	3.08653206E-02
1.75000E+02	-1.63315112E+03	-3.32982532E+06	-2.38504572E+04	2.50951497E-02	-3.28241214E+00	2.74801954E-02
2.00000E+02	-1.70685541E+03	-3.93937817E+06	-2.48753895E+04	2.29329671E-02	-2.62034943E+00	2.54205060E-02
2.25000E+02	-1.76469748E+03	-4.57175432E+06	-2.56795888E+04	2.04008889E-02	-2.01465436E+00	2.29688478E-02
2.50000E+02	-1.80824548E+03	-5.22169648E+06	-2.62849065E+04	1.78780190E-02	-1.48341327E+00	1.91929035E-02
2.75000E+02	-1.83964682E+03	-5.88459761E+06	-2.67212812E+04	1.60523598E-02	-1.03612301E+00	1.67608470E-02
3.00000E+02	-1.86053642E+03	-6.55654427E+06	-2.70115397E+04	1.44396284E-02	-6.40719409E-01	1.49268349E-02
3.25000E+02	-1.87208131E+03	-7.23409228E+06	-2.71718483E+04	1.29635405E-02	-2.87810150E-01	1.33349062E-02
3.50000E+02	-1.87528289E+03	-7.91417005E+06	-2.72161183E+04	1.15826251E-02	2.71717470E-02	1.18820552E-02
3.75000E+02	-1.87109531E+03	-1.13397064E+07	-2.63540762E+04	9.86203365E-03	3.01940077E-01	1.01046628E-02
3.85000E+02	-1.86758630E+03	-1.16032403E+07	-2.63526281E+04	9.19436800E-03	3.99557497E-01	9.42233191E-03
4.00000E+02	-1.86058121E+03	-1.19977552E+07	-2.62441614E+04	8.29012709E-03	5.33798608E-01	8.50075439E-03
4.25000E+02	-1.84473890E+03	-1.26509526E+07	-2.59990772E+04	6.84662071E-03	7.28745415E-01	7.14771019E-03
4.50000E+02	-1.82446722E+03	-1.32971381E+07	-2.56855128E+04	5.25941831E-03	8.88070949E-01	5.62220803E-03
4.75000E+02	-1.80070627E+03	-1.39347774E+07	-2.53179369E+04	3.71107334E-03	1.00771966E+00	4.02460817E-03
5.00000E+02	-1.77440539E+03	-1.45627098E+07	-2.49112163E+04	2.52318928E-03	1.09223609E+00	2.79693891E-03
5.25000E+02	-1.74634207E+03	-1.51801124E+07	-2.44773127E+04	1.59953160E-03	1.14946905E+00	1.77539733E-03
5.50000E+02	-1.71712318E+03	-1.57864272E+07	-2.40254942E+04	5.96885893E-04	1.18570954E+00	9.35273136E-04
5.75000E+02	-1.68733991E+03	-1.63813126E+07	-2.35648748E+04	-7.00277802E-04	1.19289576E+00	-3.68378158E-04
5.77000E+02	-1.68495496E+03	-1.64284055E+07	-2.35280106E+04	-8.06115642E-04	1.19205270E+00	-4.74735212E-04
6.00000E+02	-1.65778817E+03	-1.69020656E+07	-6.43415500E+03	-2.04444628E-03	1.16601390E+00	-1.95982438E-03

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6.25000E+02	-1.62949881E+03	-1.63788016E+07	4.76940246E+04	-3.39551510E-03	1.09055637E+00	-4.06726192E-03
6.50000E+02	-1.6374084E+03	-1.45577782E+07	9.69794810E+04	-4.65124216E-03	9.64017453E-01	-6.01715034E-03
6.75000E+02	-1.58172431E+03	-1.15895924E+07	1.39105865E+05	-5.71265247E-03	7.92164277E-01	-7.67189001E-03
7.00000E+02	-1.56447608E+03	-7.67867168E+06	1.72107507E+05	-6.49514552E-03	5.83825893E-01	-8.91919492E-03
7.25000E+02	-1.55277000E+03	-3.07278124E+06	1.94502982E+05	-6.93243576E-03	3.50335106E-01	-9.67191438E-03
7.50000E+02	-1.54707273E+03	1.95044590E+06	2.05398780E+05	-6.97952192E-03	1.04841498E-01	-9.87246249E-03
7.75000E+02	-1.54750376E+03	7.09917189E+06	2.04569756E+05	-6.63094437E-03	-1.36705018E-01	-9.25363355E-03
8.00000E+02	-1.55372913E+03	1.20865532E+07	1.92655961E+05	-5.95611992E-03	-3.57569769E-01	-8.17055626E-03
8.25000E+02	-1.55509313E+03	1.66500082E+07	1.70904208E+05	-5.02016995E-03	-5.47844547E-01	-6.98458613E-03
8.50000E+02	-1.58778817E+03	2.05626357E+07	1.40874554E+05	-3.86126188E-03	-7.02546914E-01	-5.40933390E-03
8.75000E+02	-1.59983442E+03	2.36402174E+07	1.04438771E+05	-2.57646239E-03	-8.14964058E-01	-3.63139947E-03
9.00000E+02	-1.62114470E+03	2.57499770E+07	6.49917237E+04	-1.23601007E-03	-8.82940596E-01	-1.84340935E-03
9.25000E+02	-1.64361162E+03	2.69535680E+07	3.16189875E+04	-8.54207559E-05	-9.07718248E-01	-1.69571079E-04
9.50000E+02	-1.66618280E+03	2.73472527E+07	-4.02079005E+01	1.32252960E-03	-8.93331005E-01	1.32285386E-03
9.75000E+02	-1.68792778E+03	2.69612095E+07	-3.05414185E+04	2.55970245E-03	-8.41653244E-01	2.80600421E-03
9.91000E+02	-1.70098375E+03	2.63244779E+07	-4.88545242E+04	3.33547700E-03	-7.89332190E-01	3.72946510E-03
1.00000E+03	-1.70792642E+03	2.58406436E+07	-5.85888723E+04	3.76240194E-03	-7.53483911E-01	4.23489285E-03
1.02500E+03	-1.72528225E+03	2.40626430E+07	-8.29340952E+04	4.89733641E-03	-6.30732314E-01	5.54525903E-03
1.05000E+03	-1.73917790E+03	2.17344014E+07	-1.02429195E+05	5.90343982E-03	-4.77320352E-01	6.70366791E-03
1.07500E+03	-1.74890119E+03	1.89900257E+07	-1.16071047E+05	6.78437702E-03	-2.97556314E-01	7.65057887E-03
1.10000E+03	-1.75385261E+03	1.59866300E+07	-1.23024561E+05	7.52102263E-03	-9.62242607E-02	8.41901212E-03
1.12500E+03	-1.75359813E+03	1.28998623E+07	-1.22615451E+05	8.00237515E-03	1.18269378E-01	8.81196096E-03
1.13300E+03	-1.75236810E+03	1.19258614E+07	-1.20740502E+05	8.12188635E-03	1.89238255E-01	8.92682303E-03
1.16000E+03	-1.74394121E+03	8.81566918E+06	-1.08963641E+05	8.44724399E-03	4.36716653E-01	9.39475391E-03
1.19000E+03	-1.72655515E+03	5.35068610E+06	-1.07748044E+05	8.68778231E-03	7.22273110E-01	9.50838000E-03
1.20600E+03	-1.71378298E+03	3.68889106E+06	-1.00444456E+05	8.76847400E-03	8.74223355E-01	9.48593439E-03
1.21200E+03	-1.70836995E+03	3.29000413E+06	-6.61430542E+04	8.83096557E-03	9.30118516E-01	9.38927338E-03
1.22500E+03	-1.69546800E+03	2.44029254E+06	-6.45484602E+04	8.94321037E-03	1.05479775E+00	9.84191948E-03
1.24200E+03	-1.67601342E+03	1.36284595E+06	-6.21461772E+04	9.04076344E-03	1.23928776E+00	1.24933288E-02
1.25000E+03	-1.66569999E+03	8.70712056E+05	-6.08708478E+04	9.06781484E-03	1.33907077E+00	1.24495286E-02
1.26418E+03	-1.64546557E+03	2.49405420E+04	-5.83685692E+04	9.08696094E-03	1.51481840E+00	1.23296592E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			5.54860325E+00		
1.26418E+03	-1.64546557E+03	2.49405420E+04	-3.10571672E+03	9.08696094E-03	1.51481840E+00	9.25950076E-03
1.27500E+03	-1.62853657E+03	2.54232495E+03	-1.01223345E+03	9.08735113E-03	1.61438643E+00	9.14358632E-03
1.28000E+03	-1.62035069E+03	-5.90929150E-10	-2.75077006E-12	9.08736407E-03	1.65996448E+00	9.08736407E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.98875762E+01	1.59101873E+03	8.07512953E+00	2.05526948E+01	1.92877855E+01	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	1.74418598E-02	3.10519073E-01	1.74418598E-02
1.16200E+03	6.53733941E-01	3.17714546E+04	1.58889578E+04	1.74418915E-02	3.44767384E-01	1.71241124E-02
1.16400E+03	1.37751695E+00	6.35523065E+04	1.58919411E+04	1.74419869E-02	3.79015635E-01	1.71241480E-02
1.16600E+03	2.16979657E+00	9.53394074E+04	1.58952068E+04	1.74421458E-02	4.13264015E-01	1.71242416E-02
1.16800E+03	3.03057318E+00	1.27133322E+05	1.58987547E+04	1.74423682E-02	4.47512640E-01	1.71243931E-02
1.17000E+03	3.95984739E+00	1.58934614E+05	1.59025850E+04	1.74426543E-02	4.81761626E-01	1.71246026E-02
1.18000E+03	9.63371980E+00	3.18071515E+05	1.59259716E+04	1.74450391E-02	6.53016029E-01	1.71265197E-02
1.19000E+03	1.70202563E+01	4.77477578E+05	1.59564175E+04	1.74490166E-02	8.24296858E-01	1.71298883E-02
1.20000E+03	2.61197939E+01	6.37223402E+05	1.59939241E+04	1.74545898E-02	9.95618643E-01	1.71347113E-02
1.20600E+03	3.24019516E+01	7.33263357E+05	1.60198180E+04	1.74587012E-02	1.09843743E+00	1.71383048E-02
1.21000E+03	3.69381388E+01	6.64207865E+05	-1.72540020E+04	1.74605645E-02	1.16965713E+00	1.78056445E-02
1.21200E+03	3.93130649E+01	6.29709601E+05	-1.72442130E+04	1.74614271E-02	1.20526910E+00	1.78063113E-02
1.22000E+03	4.95250448E+01	4.91921133E+05	-1.72021211E+04	1.74644179E-02	1.34772874E+00	1.78084604E-02
1.23000E+03	6.38927861E+01	3.20189909E+05	-1.71429000E+04	1.74671247E-02	1.52582203E+00	1.78099827E-02
1.24000E+03	8.00415147E+01	1.49087602E+05	-1.70763380E+04	1.74686885E-02	1.70392409E+00	1.78102153E-02
1.24200E+03	8.34849832E+01	-1.06270820E-10	1.56125709E-09	1.74688262E-02	1.73953929E+00	1.74688262E-02

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Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.96400985E+01	2.46413938E+03	6.55523083E+02	6.32228199E+02	2.29665413E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	3.88592880E-02	-9.22871984E+00 3.88592880E-02
-3.70000E+01	-1.15029125E+02	-3.86431954E+04	-3.80777809E+03	3.87727860E-02	-8.44152539E+00 3.98019152E-02
-2.50000E+01	-2.13341313E+02	-9.71754057E+04	-5.92615634E+03	3.83780386E-02	-7.94383929E+00 4.18640129E-02
0.	-3.98790143E+02	-2.96454004E+05	-9.92179548E+03	3.63136231E-02	-6.89606358E+00 4.10382876E-02
2.50000E+01	-5.58498412E+02	-5.88638453E+05	-1.33625442E+04	3.36503671E-02	-5.89493625E+00 3.74682369E-02
5.00000E+01	-6.94349944E+02	-9.60309337E+05	-1.62891952E+04	3.16161378E-02	-4.98329284E+00 3.52359590E-02
7.50000E+01	-8.08199344E+02	-1.39914995E+06	-1.87419369E+04	2.98846164E-02	-4.13321829E+00 3.31726755E-02
1.00000E+02	-9.01356436E+02	-1.89368785E+06	-2.07485225E+04	2.77237755E-02	-3.32499642E+00 3.13638671E-02
1.25000E+02	-9.74960450E+02	-2.43306056E+06	-2.23336176E+04	2.48815746E-02	-2.57132393E+00 2.87997531E-02
1.50000E+02	-1.03061698E+03	-3.00714118E+06	-2.35318017E+04	2.13057776E-02	-1.89169220E+00 2.54341639E-02
1.75000E+02	-1.07072638E+03	-3.60687003E+06	-2.43954376E+04	1.93383925E-02	-1.32292338E+00 2.17779363E-02
2.00000E+02	-1.09725018E+03	-4.22447132E+06	-2.49662567E+04	1.70083436E-02	-8.06063092E-01 1.95049693E-02
2.25000E+02	-1.11160934E+03	-4.85299620E+06	-2.52748722E+04	1.43070986E-02	-3.50988081E-01 1.68345859E-02
2.50000E+02	-1.11550562E+03	-5.48633044E+06	-2.53580268E+04	1.16417389E-02	2.46054566E-02 1.29102569E-02
2.75000E+02	-1.11117924E+03	-6.11943101E+06	-2.52640908E+04	9.73316178E-03	3.13843252E-01 1.04030130E-02
3.00000E+02	-1.10031328E+03	-6.74836457E+06	-2.50294407E+04	8.06453296E-03	5.49594697E-01 8.51598838E-03
3.25000E+02	-1.08410814E+03	-7.36994606E+06	-2.46798324E+04	6.55291880E-03	7.41773346E-01 6.89022538E-03
3.50000E+02	-1.06358657E+03	-7.98158218E+06	-2.42372702E+04	5.15311355E-03	8.95386821E-01 5.41977056E-03
3.75000E+02	-1.03977787E+03	-9.78587634E+06	4.77360819E+03	3.60754406E-03	1.00384568E+00 3.56359578E-03
3.85000E+02	-1.02957424E+03	-9.73810785E+06	4.78012417E+03	3.03930790E-03	1.03662793E+00 2.99795734E-03
4.00000E+02	-1.01372684E+03	-9.66357654E+06	5.15973650E+03	2.29544111E-03	1.07583233E+00 2.25403070E-03
4.25000E+02	-9.86260137E+02	-9.52641281E+06	5.81751974E+03	1.17071923E-03	1.11758471E+00 1.10334784E-03
4.50000E+02	-9.58108576E+02	-9.37256393E+06	6.49170129E+03	1.48385580E-05	1.13061983E+00 -7.68521383E-05
4.75000E+02	-9.30000147E+02	-9.20183631E+06	7.16491327E+03	-1.04326378E-03	1.11473842E+00 -1.13199335E-03
5.00000E+02	-9.02579134E+02	-9.01445782E+06	7.82153746E+03	-1.80398067E-03	1.07643365E+00 -1.88993163E-03
5.25000E+02	-8.76325687E+02	-8.81099378E+06	8.45014658E+03	-2.35852657E-03	1.02196573E+00 -2.41923957E-03
5.50000E+02	-8.51591415E+02	-8.59225274E+06	9.04242832E+03	-2.91936936E-03	9.54525871E-01 -3.04672751E-03
5.75000E+02	-8.28762031E+02	-8.35925203E+06	9.58916382E+03	-3.60298966E-03	8.69675534E-01 -3.73804830E-03
6.00000E+02	-8.27030211E+02	-8.34003219E+06	9.63062261E+03	-3.65685836E-03	8.62144963E-01 -3.79250093E-03
6.00000E+02	-8.08268524E+02	-8.04807141E+06	2.73417305E+04	-4.26675870E-03	7.66873925E-01 -4.65185349E-03

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6.25000E+02	-7.90713658E+02	-6.69363971E+06	7.93649792E+04	-4.86992700E-03	6.33360842E-01	-5.98774361E-03
6.50000E+02	-7.76880628E+02	-4.17191775E+06	1.20357742E+05	-5.31494445E-03	4.70108525E-01	-7.01012392E-03
6.75000E+02	-7.67401286E+02	-7.83534031E+05	1.48445143E+05	-5.51948153E-03	2.86384609E-01	-7.61025819E-03
7.00000E+02	-7.62645988E+02	3.13335569E+06	1.62527886E+05	-5.42709659E-03	9.37262317E-02	-7.71622175E-03
7.25000E+02	-7.62678913E+02	7.22426427E+06	1.62414709E+05	-5.00942983E-03	-9.50366822E-02	-7.29696095E-03
7.50000E+02	-7.67238726E+02	1.11419509E+07	1.48879659E+05	-4.26657924E-03	-2.66824215E-01	-6.36347585E-03
7.75000E+02	-7.75747498E+02	1.45704920E+07	1.23652961E+05	-3.26200182E-03	-4.08337399E-01	-4.84729619E-03
8.00000E+02	-7.87297912E+02	1.72495473E+07	8.94144139E+04	-2.13820278E-03	-5.09909266E-01	-3.16595467E-03
8.25000E+02	-8.00846460E+02	1.89918239E+07	4.92402379E+04	-9.56095780E-04	-5.68849985E-01	-1.52207553E-03
8.50000E+02	-8.15345590E+02	1.96881899E+07	6.26543973E+03	2.50598677E-04	-5.85400770E-01	1.81747691E-04
8.75000E+02	-8.29740354E+02	1.93078017E+07	-3.63926492E+04	1.38670444E-03	-5.60832269E-01	1.75430696E-03
9.00000E+02	-8.43059172E+02	1.78964487E+07	-7.46895535E+04	2.39885382E-03	-4.99638646E-01	3.09688703E-03
9.25000E+02	-8.54461685E+02	1.56855863E+07	-1.00966158E+05	3.24385397E-03	-4.08984950E-01	4.05809718E-03
9.50000E+02	-8.63318822E+02	1.29081821E+07	-1.20213731E+05	3.89553602E-03	-2.97080989E-01	4.86500159E-03
9.75000E+02	-8.69147693E+02	9.72979594E+06	-1.32883106E+05	4.41123600E-03	-1.67313035E-01	5.48287396E-03
9.91000E+02	-8.71106072E+02	7.56542546E+06	-1.37141710E+05	4.66296784E-03	-7.71808955E-02	5.76894938E-03
1.00000E+03	-8.71564497E+02	6.32589582E+06	-1.38138497E+05	4.77663631E-03	-2.46912669E-02	5.89065645E-03
1.02500E+03	-8.70313237E+02	2.88934414E+06	-1.35427935E+05	4.98562844E-03	1.25344911E-01	6.04365919E-03
1.05000E+03	-8.65289116E+02	-3.77126955E+05	-1.24522468E+05	5.03972433E-03	2.76479787E-01	6.01255612E-03
1.07500E+03	-8.56524273E+02	-3.26896464E+06	-1.05492879E+05	4.95967668E-03	4.23732300E-01	5.74693697E-03
1.10000E+03	-8.44177746E+02	-5.58688811E+06	-7.86840531E+04	4.77151072E-03	5.62685384E-01	5.34584687E-03
1.12500E+03	-8.28507792E+02	-7.14146422E+06	-4.40157955E+04	4.55828377E-03	6.89446163E-01	4.84890427E-03
1.13300E+03	-8.22839549E+02	-7.44050993E+06	-3.06254382E+04	4.48802465E-03	7.27614660E-01	4.69219424E-03
1.16000E+03	-8.01561259E+02	-7.58193259E+06	1.69338654E+04	4.24879820E-03	8.46433206E-01	4.10154720E-03
1.19000E+03	-7.74321810E+02	-7.21955321E+06	3.01544297E+04	3.99272360E-03	9.67173128E-01	3.76307066E-03
1.20600E+03	-7.58377934E+02	-6.61364250E+06	4.43665846E+04	3.86866902E-03	1.02558870E+00	3.55176484E-03
1.21200E+03	-7.52170986E+02	-5.96093472E+06	1.09380769E+05	3.75605022E-03	1.04339394E+00	2.83277659E-03
1.22500E+03	-7.38399062E+02	-4.52191345E+06	1.12020548E+05	3.55047582E-03	1.07536360E+00	1.99081217E-03
1.24200E+03	-7.20019762E+02	-2.58759012E+06	1.15550217E+05	3.36752716E-03	1.07686245E+00	-3.05192935E-03
1.25000E+03	-7.11504863E+02	-1.65663942E+06	1.17181080E+05	3.31605827E-03	1.05186232E+00	-3.19400171E-03
1.26418E+03	-6.96920322E+02	2.49450663E+04	1.19974733E+05	3.28080529E-03	1.00512728E+00	-3.38445766E-03
1.26418000E+03 TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =						
1.26418E+03	-6.96920322E+02	2.49450663E+04	-3.12670085E+03	3.28080529E-03	1.00512728E+00	3.45451089E-03
1.27500E+03	-6.85846045E+02	2.52062322E+03	-1.00560870E+03	3.28119438E-03	1.04187416E+00	3.33706153E-03
1.28000E+03	-6.80595309E+02	2.37315608E-14	-5.72651682E-16	3.28120719E-03	1.05842021E+00	3.28120719E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
4.96400985E+01	2.46413938E+03	8.07512953E+00	3.13700133E+01	2.99114826E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	1.87079751E-02	6.17535272E-01	1.87079751E-02
1.16200E+03	1.26820900E+00	5.95057432E+04	2.97626853E+04	1.87080346E-02	6.53761147E-01	1.81127809E-02
1.16400E+03	2.61195684E+00	1.19039615E+05	2.97712635E+04	1.87082131E-02	6.89986698E-01	1.81127879E-02
1.16600E+03	4.02815588E+00	1.78591106E+05	2.97803042E+04	1.87085108E-02	7.26212372E-01	1.81129047E-02
1.16800E+03	5.51680658E+00	2.38161140E+05	2.97898074E+04	1.87089275E-02	7.62438390E-01	1.81131314E-02
1.17000E+03	7.07790984E+00	2.97750644E+05	2.97997732E+04	1.87094634E-02	7.98664971E-01	1.81134680E-02
1.18000E+03	1.59702772E+01	5.96022573E+05	2.98565401E+04	1.87139318E-02	9.79814023E-01	1.81168010E-02
1.19000E+03	2.66743478E+01	8.94919997E+05	2.99248725E+04	1.87213860E-02	1.16101017E+00	1.81228885E-02
1.20000E+03	3.91907304E+01	1.19455859E+06	3.00047744E+04	1.87318327E-02	1.34228100E+00	1.81317372E-02
1.20600E+03	4.75708263E+01	1.37474564E+06	3.00582711E+04	1.87395404E-02	1.45109083E+00	1.81383750E-02
1.21000E+03	5.35304055E+01	1.24252862E+06	-3.30341990E+04	1.87430301E-02	1.52870043E+00	1.94037141E-02
1.21200E+03	5.66266147E+01	1.17647991E+06	-3.30144334E+04	1.87446428E-02	1.56750910E+00	1.94049314E-02
1.22000E+03	6.97876911E+01	9.12695222E+05	-3.29304160E+04	1.87502136E-02	1.72276515E+00	1.94088219E-02
1.23000E+03	8.79858385E+01	5.83961601E+05	-3.28142430E+04	1.87552018E-02	1.91686873E+00	1.94114867E-02
1.24000E+03	1.08125114E+02	2.56451668E+05	-3.26856783E+04	1.87580025E-02	2.11098677E+00	1.94117160E-02
1.24200E+03	1.12385911E+02	2.83831228E-14	-6.36752804E-09	1.87582370E-02	2.14980015E+00	1.87582370E-02

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t=40

Mode 4

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
6.42670878E+01	4.13025858E+03	6.55523083E+02	4.53114275E+02	4.42395698E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	9.57604967E-02	-1.82478626E+01	9.57604967E-02
-3.70000E+01	-2.23556527E+02	-1.27144463E+05	-1.24798964E+04	9.54753476E-02	-1.62997271E+01	9.88482926E-02
-2.50000E+01	-4.11644461E+02	-3.18206573E+05	-1.92734692E+04	9.41800456E-02	-1.50482620E+01	1.05517380E-01
0.	-7.54699699E+02	-9.59888489E+05	-3.16626432E+04	8.74602133E-02	-1.24101960E+01	1.02537662E-01
2.50000E+01	-1.03338127E+03	-1.88193737E+06	-4.17254051E+04	7.88901839E-02	-9.93125051E+00	9.08117282E-02
5.00000E+01	-1.25391506E+03	-3.02872160E+06	-4.96877748E+04	7.24295421E-02	-7.74413031E+00	8.34712698E-02
7.50000E+01	-1.42232809E+03	-4.35065380E+06	-5.57687010E+04	6.70052910E-02	-5.75636677E+00	7.67892736E-02
1.00000E+02	-1.54287538E+03	-5.80273479E+06	-6.01192442E+04	6.03373518E-02	-3.90585106E+00	7.08845877E-02
1.25000E+02	-1.61926707E+03	-7.34330331E+06	-6.28741228E+04	5.16961888E-02	-2.23093256E+00	6.27267367E-02
1.50000E+02	-1.65660566E+03	-8.93466312E+06	-6.42175745E+04	4.09906761E-02	-7.88797680E-01	5.22569172E-02
1.75000E+02	-1.66215928E+03	-1.05446735E+07	-6.44153935E+04	3.51934981E-02	3.26502378E-01	4.16350374E-02
2.00000E+02	-1.64175969E+03	-1.21476110E+07	-6.36754625E+04	2.84389224E-02	1.28418941E+00	3.48064687E-02
2.25000E+02	-1.59967304E+03	-1.37219089E+07	-6.21518570E+04	2.07377689E-02	2.05828031E+00	2.69529546E-02
2.50000E+02	-1.54087624E+03	-1.52501528E+07	-6.00248021E+04	1.32606476E-02	2.60597982E+00	1.62633474E-02
2.75000E+02	-1.47151166E+03	-1.67200136E+07	-5.75165826E+04	7.99956927E-03	2.92257507E+00	9.52456198E-03
3.00000E+02	-1.39609148E+03	-1.81241766E+07	-5.47905053E+04	3.47866063E-03	3.09539154E+00	4.46691565E-03
3.25000E+02	-1.31783120E+03	-1.94586921E+07	-5.19622295E+04	-5.47091237E-04	3.15208337E+00	1.63091947E-04
3.50000E+02	-1.23943863E+03	-2.07222533E+07	-4.91294024E+04	-4.21232556E-03	3.10741867E+00	-3.67180680E-03
3.75000E+02	-1.16373074E+03	-1.52112297E+07	1.18162824E+05	-6.89659544E-03	2.93907126E+00	-7.98446308E-03
3.85000E+02	-1.13475757E+03	-1.40294457E+07	1.18193831E+05	-7.74790131E-03	2.85521585E+00	-8.77033929E-03
4.00000E+02	-1.09296747E+03	-1.22438535E+07	1.19871195E+05	-8.75740532E-03	2.71613926E+00	-9.71945343E-03
4.25000E+02	-1.02829313E+03	-9.21407826E+06	1.22466734E+05	-1.00189852E-02	2.45276133E+00	-1.14372450E-02
4.50000E+02	-9.70661791E+02	-6.12287528E+06	1.24779552E+05	-1.09562621E-02	2.15297200E+00	-1.27186852E-02
4.75000E+02	-9.20867237E+02	-2.97773265E+06	1.26777796E+05	-1.14847036E-02	1.82975942E+00	-1.30547072E-02
5.00000E+02	-8.79205250E+02	2.13290542E+05	1.28449517E+05	-1.16075290E-02	1.50349208E+00	-1.30190622E-02
5.25000E+02	-8.45654222E+02	3.44202855E+06	1.29795707E+05	-1.14993194E-02	1.18178089E+00	-1.24318817E-02
5.50000E+02	-8.20068833E+02	6.70042566E+06	1.30822169E+05	-1.11563603E-02	8.60701149E-01	-1.29989261E-02
5.75000E+02	-8.02542821E+02	9.98042923E+06	1.31525064E+05	-1.04838633E-02	5.43450031E-01	-1.23363290E-02
5.77000E+02	-8.01480529E+02	1.02435223E+07	1.31567688E+05	-1.04186248E-02	5.18841724E-01	-1.22716908E-02
6.00000E+02	-7.92715233E+02	1.33161356E+07	1.42590882E+05	-9.54589960E-03	2.45539187E-01	-1.15542219E-02

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6.25000E+02	-7.90086134E+02	1.71149172E+07	1.55570390E+05	-8.32101507E-03	-3.19408783E-02	-1.05121473E-02
6.50000E+02	-7.93976876E+02	2.08239038E+07	1.36147045E+05	-6.78794996E-03	-2.73666552E-01	-8.70551398E-03
6.75000E+02	-8.03265940E+02	2.36980642E+07	8.98934726E+04	-4.98492441E-03	-4.61792408E-01	-6.25102966E-03
7.00000E+02	-8.16432272E+02	2.51575628E+07	2.43702676E+04	-3.00391500E-03	-5.82454962E-01	-3.34715821E-03
7.25000E+02	-8.31677765E+02	2.48302980E+07	-5.14833464E+04	-9.75514761E-04	-6.27533612E-01	-2.50397206E-04
7.50000E+02	-8.47085680E+02	2.25768019E+07	-1.28137476E+05	9.48956120E-04	-5.95747322E-01	2.75370930E-03
7.75000E+02	-8.60812884E+02	1.84940499E+07	-1.96379491E+05	2.56707002E-03	-4.94823483E-01	5.08475580E-03
8.00000E+02	-8.71374558E+02	1.28893891E+07	-2.48879350E+05	3.68182377E-03	-3.45178812E-01	6.54250595E-03
8.25000E+02	-8.77824766E+02	6.22058612E+06	-2.80953035E+05	4.30661991E-03	-1.67767408E-01	7.53596514E-03
8.50000E+02	-8.79649115E+02	-9.65682909E+05	-2.90019909E+05	4.47220568E-03	2.23152409E-02	7.65923764E-03
8.75000E+02	-8.76774003E+02	-8.08475085E+06	-2.75734345E+05	4.21123410E-03	2.05134242E-01	6.99642950E-03
9.00000E+02	-8.69577786E+02	-1.45749432E+07	-2.41384000E+05	3.59704190E-03	3.65836205E-01	5.85296713E-03
9.25000E+02	-8.58743680E+02	-2.01058650E+07	-1.99676765E+05	2.72929523E-03	4.94419488E-01	4.33959172E-03
9.50000E+02	-8.45186226E+02	-2.44977239E+07	-1.50286474E+05	1.71089694E-03	5.85756180E-01	2.92288463E-03
9.75000E+02	-8.29816631E+02	-2.75650019E+07	-9.42926558E+04	5.22347037E-04	6.38698396E-01	1.28277168E-03
9.91000E+02	-8.19494852E+02	-2.87737633E+07	-5.66903940E+04	-2.98583494E-04	6.50283437E-01	1.58597103E-04
1.00000E+03	-8.13648940E+02	-2.91881643E+07	-3.54068091E+04	-7.73078463E-04	6.48807986E-01	-4.87539680E-04
1.02500E+03	-7.97790758E+02	-2.93446067E+07	2.23645365E+04	-2.10697096E-03	6.14066591E-01	-2.28169390E-03
1.05000E+03	-7.83351667E+02	-2.81130309E+07	7.49753231E+04	-3.37181761E-03	5.35847325E-01	-3.95756232E-03
1.07500E+03	-7.71368066E+02	-2.56706096E+07	1.18633460E+05	-4.53739424E-03	4.18148125E-01	-5.42271856E-03
1.10000E+03	-7.62761094E+02	-2.22839009E+07	1.50005507E+05	-5.54915441E-03	2.66671184E-01	-6.64408511E-03
1.12500E+03	-7.58230665E+02	-1.82939770E+07	1.66695489E+05	-6.22636499E-03	9.30175443E-02	-7.32699547E-03
1.13300E+03	-7.57724176E+02	-1.69511218E+07	1.68704797E+05	-6.39606363E-03	3.36047763E-02	-7.52076228E-03
1.16000E+03	-7.59662197E+02	-1.24338263E+07	1.62455910E+05	-6.85767196E-03	-1.79924678E-01	-8.27033205E-03
1.19000E+03	-7.69314553E+02	-3.57875107E+06	2.83521545E+05	-7.12947093E-03	-4.62575311E-01	-9.28874097E-03
1.20600E+03	-7.77893909E+02	8.50995865E+05	2.70833521E+05	-7.15363853E-03	-6.09620683E-01	-9.08816368E-03
1.21200E+03	-7.81679002E+02	7.96875988E+05	-9.63432761E+03	-7.13887059E-03	-6.52077190E-01	-7.05754806E-03
1.22500E+03	-7.90747852E+02	6.53115587E+05	-1.25460201E+04	-7.11032691E-03	-7.43130414E-01	-6.93564849E-03
1.24200E+03	-8.04354636E+02	4.03564471E+05	-1.69163476E+04	-7.08285485E-03	-8.56116042E-01	-6.14305776E-03
1.25000E+03	-8.11398013E+02	2.59272172E+05	-1.91775322E+04	-7.07478434E-03	-9.04728034E-01	-6.00936588E-03
1.26418E+03	-8.24819667E+02	-4.27706506E+04	-2.34870441E+04	-7.06990716E-03	-9.88218371E-01	-5.76507137E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =					
1.26418E+03	-8.24819667E+02	-4.27706506E+04	5.31047942E+03	-7.06990716E-03	-9.88218371E-01	-7.36493379E-03
1.27500E+03	-8.35937601E+02	-4.37618815E+03	1.74095355E+03	-7.07057719E-03	-1.06685255E+00	-7.16729683E-03
1.28000E+03	-8.41360854E+02	3.91222695E-08	1.62113669E-10	-7.07059947E-03	-1.10244864E+00	-7.07059947E-03

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BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.42670878E+01	4.13025858E+03	8.07512953E+00	2.10483938E+02	1.84714253E+02	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-7.86104155E-02	1.02029269E+00	-7.86104155E-02
1.16200E+03	1.88377179E+00	-2.75403710E+05	-1.37676198E+05	-7.86106909E-02	8.68579746E-01	-7.58571670E-02		
1.16400E+03	3.46921620E+00	-5.50738599E+05	-1.37659233E+05	-7.86115171E-02	7.16864327E-01	-7.58583324E-02		
1.16600E+03	4.75122709E+00	-8.26042806E+05	-1.37645515E+05	-7.86128938E-02	5.65146092E-01	-7.58599835E-02		
1.16800E+03	5.72979787E+00	-1.10132282E+06	-1.37635044E+05	-7.86148212E-02	4.13424069E-01	-7.58621203E-02		
1.17000E+03	6.40491997E+00	-1.37658515E+06	-1.37627821E+05	-7.86172991E-02	2.61697287E-01	-7.58647427E-02		
1.18000E+03	5.22836525E+00	-2.75285865E+06	-1.37640410E+05	-7.86379462E-02	-4.97042001E-01	-7.58851380E-02		
1.19000E+03	-3.53680513E+00	-4.12966401E+06	-1.37734198E+05	-7.86723581E-02	-1.25604594E+00	-7.59176741E-02		
1.20000E+03	-1.98938448E+01	-5.50781339E+06	-1.37909221E+05	-7.87205440E-02	-2.01543598E+00	-7.59623596E-02		
1.20600E+03	-3.33539743E+01	-6.33568616E+06	-1.38053247E+05	-7.87560741E-02	-2.47130590E+00	-7.59950091E-02		
1.21000E+03	-4.38915608E+01	-5.77903327E+06	1.39103203E+05	-7.87722269E-02	-2.79749605E+00	-8.15542910E-02		
1.21200E+03	-4.96496660E+01	-5.50088790E+06	1.39041590E+05	-7.87797468E-02	-2.96061099E+00	-8.15605787E-02		
1.22000E+03	-7.59447337E+01	-4.38964338E+06	1.38760229E+05	-7.88061206E-02	-3.61318330E+00	-8.15813252E-02		
1.23000E+03	-1.16155947E+02	-3.00411966E+06	1.38329963E+05	-7.88307641E-02	-4.42908590E+00	-8.15973633E-02		
1.24000E+03	-1.64526805E+02	-1.62333515E+06	1.37812388E+05	-7.88461861E-02	-5.24509401E+00	-8.16024338E-02		
1.24200E+03	-1.75180197E+02	3.38082534E-09	-1.79608587E-09	-7.88477169E-02	-5.40825719E+00	-7.88477169E-02		

±40,4

t=40

Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
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7.30658305E+01	5.33861558E+03	6.55523083E+02	3.23868284E+02	3.06808489E+02	0.
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STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	7.29406222E-02	-1.24983348E+01	7.29406222E-02
-3.70000E+01	-1.51596337E+02	-1.12092996E+05	-1.09777547E+04	7.26889542E-02	-1.10104971E+01	7.56559149E-02
-2.50000E+01	-2.77931974E+02	-2.79756628E+05	-1.68761713E+04	7.15487840E-02	-1.00454422E+01	8.14759436E-02
0.	-5.03469161E+02	-8.38230610E+05	-2.74042641E+04	6.56618806E-02	-8.01037550E+00	7.87115302E-02
2.50000E+01	-6.79565207E+02	-1.63070520E+06	-3.56225996E+04	5.82062788E-02	-6.11854182E+00	6.83841644E-02
5.00000E+01	-8.11723277E+02	-2.60233916E+06	-4.17894434E+04	5.26310219E-02	-4.48260642E+00	6.19175649E-02
7.50000E+01	-9.05216415E+02	-3.70515308E+06	-4.61524213E+04	4.79900016E-02	-3.02066582E+00	5.60869176E-02
1.00000E+02	-9.63764267E+02	-4.89634784E+06	-4.88821840E+04	4.23385977E-02	-1.67931039E+00	5.09144194E-02
1.25000E+02	-9.90612454E+02	-6.13690541E+06	-5.01311124E+04	3.50832959E-02	-4.90493470E-01	4.38782279E-02
1.50000E+02	-9.90158969E+02	-7.39225724E+06	-5.01044924E+04	2.61824504E-02	4.99007480E-01	3.49727123E-02
1.75000E+02	-9.68486075E+02	-8.63393901E+06	-4.90898515E+04	2.14114891E-02	1.21963994E+00	2.63204742E-02
2.00000E+02	-9.30415578E+02	-9.84036004E+06	-4.73093005E+04	1.59109756E-02	1.80830911E+00	2.06419056E-02
2.25000E+02	-8.79493784E+02	-1.09943943E+07	-4.49284012E+04	9.70720090E-03	2.24537098E+00	1.42000410E-02
2.50000E+02	-8.19789351E+02	-1.20833447E+07	-4.21376649E+04	3.74702991E-03	2.50042726E+00	5.85493784E-03
2.75000E+02	-7.56119317E+02	-1.30997803E+07	-3.91623995E+04	-3.98883555E-04	2.57721339E+00	6.39466968E-04
3.00000E+02	-6.91969424E+02	-1.40412953E+07	-3.61655660E+04	-3.92150821E-03	2.54268509E+00	-3.26919078E-03
3.25000E+02	-6.29823711E+02	-1.49088465E+07	-3.32626658E+04	-7.02337357E-03	2.41874032E+00	-6.56876286E-03
3.50000E+02	-5.71758342E+02	-1.57060211E+07	-3.05504711E+04	-9.81659131E-03	2.21745230E+00	-9.48047684E-03
3.75000E+02	-5.19892210E+02	-4.76911321E+06	1.23176190E+05	-1.09051992E-02	1.92727769E+00	-1.20392225E-02
3.85000E+02	-5.01225660E+02	-3.53722082E+06	1.23202008E+05	-1.11472458E-02	1.80595856E+00	-1.22130071E-02
4.00000E+02	-4.75518904E+02	-1.67901117E+06	1.24535382E+05	-1.13496098E-02	1.62152686E+00	-1.23490912E-02
4.25000E+02	-4.38887646E+02	1.45896848E+06	1.26435219E+05	-1.13667631E-02	1.30820945E+00	-1.28309810E-02
4.50000E+02	-4.10155207E+02	4.63933098E+06	1.27925211E+05	-1.09929185E-02	9.89926725E-01	-1.27997718E-02
4.75000E+02	-3.89306148E+02	7.85180541E+06	1.29006000E+05	-1.02921764E-02	6.81100601E-01	-1.18897739E-02
5.00000E+02	-3.75883508E+02	1.10864211E+07	1.29701685E+05	-9.50925941E-03	3.96061998E-01	-1.09345527E-02
5.25000E+02	-3.69283318E+02	1.43339412E+07	1.30043590E+05	-8.72434752E-03	1.35513242E-01	-9.65869075E-03
5.50000E+02	-3.68922547E+02	1.75859203E+07	1.30061640E+05	-7.67825900E-03	-1.08618920E-01	-9.51011308E-03
5.75000E+02	-3.74434657E+02	2.08344660E+07	1.29774697E+05	-6.12900157E-03	-3.27509644E-01	-7.95681421E-03
5.77000E+02	-3.75105454E+02	2.10939809E+07	1.29739904E+05	-5.99374848E-03	-3.43287812E-01	-7.82107108E-03
6.00000E+02	-3.84904942E+02	2.39880020E+07	1.06321822E+05	-4.31882114E-03	-5.03060247E-01	-5.81631159E-03

t=41, 179

6.25000E+02	-3.98923623E+02	2.55537938E+07	1.61302327E+14	-2.30599176E-03	-6.08187446E-01	-2.53317814E-03
6.50000E+02	-4.14513972E+02	2.47101481E+07	-8.41576224E+14	-2.62346845E-04	-6.28267577E-01	9.22971780E-04
6.75000E+02	-4.29541713E+02	2.13763815E+07	-1.80819406E+05	1.61224256E-03	-5.63878718E-01	4.15899476E-03
7.00000E+02	-4.42008890E+02	1.58071606E+07	-2.61008645E+05	3.12506824E-03	-4.25285837E-01	6.80124634E-03
7.25000E+02	-4.50284338E+02	8.55171674E+06	-3.14236898E+05	4.11623394E-03	-2.31359806E-01	8.54210575E-03
7.50000E+02	-4.53293439E+02	3.78921919E+05	-3.33594092E+05	4.47959471E-03	-7.42747948E-03	9.17810305E-03
7.75000E+02	-4.50650196E+02	-7.82341454E+06	-3.16613823E+05	4.19385261E-03	2.14897008E-01	8.25306829E-03
8.00000E+02	-4.42843712E+02	-1.51752798E+07	-2.66466303E+05	3.38019964E-03	4.03322185E-01	6.44303072E-03
8.25000E+02	-4.30972215E+02	-2.09286850E+07	-1.90150781E+05	2.19765662E-03	5.39955486E-01	4.38329778E-03
8.50000E+02	-4.16399169E+02	-2.45379216E+07	-9.65207189E+04	7.74148686E-04	6.17420109E-01	1.83481593E-03
8.75000E+02	-4.00690828E+02	-2.56939556E+07	4.37904717E+03	-6.94081729E-04	6.30408151E-01	-7.38314529E-04
9.00000E+02	-3.85419362E+02	-2.43459848E+07	9.94866567E+04	-2.06014814E-03	5.82771406E-01	-2.98992997E-03
9.25000E+02	-3.71980239E+02	-2.09839858E+07	1.66584377E+05	-3.20445904E-03	4.86526862E-01	-4.54788144E-03
9.50000E+02	-3.61394137E+02	-1.61642713E+07	2.16442855E+05	-4.05346233E-03	3.56477376E-01	-5.79896922E-03
9.75000E+02	-3.54407460E+02	-1.03034280E+07	2.49351887E+05	-4.65811947E-03	1.99762275E-01	-6.66902178E-03
9.91000E+02	-3.52085215E+02	-6.21528861E+06	2.60292242E+05	-4.89881545E-03	9.01794740E-02	-6.99794644E-03
1.00000E+03	-3.51559294E+02	-3.85950112E+06	2.62768586E+05	-4.98127588E-03	2.66918892E-02	-7.10037737E-03
1.02500E+03	-3.53119574E+02	2.66164242E+06	2.55431545E+05	-5.00796636E-03	-1.51315177E-01	-7.00352530E-03
1.05000E+03	-3.59047064E+02	8.74034174E+06	2.27529770E+05	-4.75537174E-03	-3.21402633E-01	-6.53294807E-03
1.07500E+03	-3.69025593E+02	1.38787700E+07	1.80561138E+05	-4.26344079E-03	-4.73677494E-01	-5.61091197E-03
1.10000E+03	-3.82491910E+02	1.76313080E+07	1.17167526E+05	-3.59593541E-03	-5.99920780E-01	-4.45117283E-03
1.12500E+03	-3.98724825E+02	1.96254469E+07	3.93611332E+04	-2.97231946E-03	-6.94902308E-01	-3.23220689E-03
1.13300E+03	-4.04381394E+02	1.98251727E+07	1.04042449E+04	-2.78226238E-03	-7.19240044E-01	-2.85162401E-03
1.16000E+03	-4.24648280E+02	1.86678452E+07	-8.81129345E+04	-2.17074854E-03	-7.76794193E-01	-1.40454911E-03
1.19000E+03	-4.47476770E+02	7.36608957E+06	-4.08882354E+05	-1.71940518E-03	-7.42451383E-01	1.39459950E-03
1.20600E+03	-4.59172694E+02	6.24319121E+05	-4.31564082E+05	-1.64728914E-03	-7.19521477E-01	1.43531144E-03
1.21200E+03	-4.63521789E+02	7.28545461E+05	1.64665846E+04	-1.63515778E-03	-7.30176943E-01	-1.77415080E-03
1.22500E+03	-4.73163919E+02	9.16741143E+05	1.24659019E+04	-1.60273737E-03	-7.53227635E-01	-1.77630029E-03
1.24200E+03	-4.86231793E+02	1.08289159E+06	7.04461421E+03	-1.55094924E-03	-7.84573445E-01	-1.94231670E-03
1.25000E+03	-4.92567779E+02	1.12876416E+06	4.41531537E+03	-1.52409867E-03	-7.99422879E-01	-1.76939397E-03
1.26418E+03	-5.04066597E+02	1.15769239E+06	-3.57585676E+02	-1.47463415E-03	-8.22292631E-01	-1.45476828E-03
1.26418000E+03	TOTAL DEFECTION OF THE SPRING MASS SYSTEM =	5.71275926E-01				
1.26418E+03	-5.04066597E+02	1.15769239E+06	1.87343036E+04	-1.47463415E-03	-8.22292631E-01	-2.51542880E-03
1.27500E+03	-5.13103803E+02	1.34021090E+06	1.49835918E+04	-1.43339845E-03	-8.48170492E-01	-2.26582021E-03
1.28000E+03	-5.17372234E+02	1.41071051E+06	1.32124382E+04	-1.41242913E-03	-8.59202161E-01	-2.14645347E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.30658305E+01	5.33861558E+03	8.07512953E+00	3.39729928E+02	2.84175686E+02	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	1.15384608E-01	-2.82679536E+00	1.15384608E-01
1.16200E+03	-5.41762394E+00	4.46694642E+05	2.23253595E+05	1.15385055E-01	-2.60495974E+00	1.10919983E-01
1.16400E+03	-1.04057016E+01	8.93131821E+05	2.23184607E+05	1.15386395E-01	-2.38311718E+00	1.10922703E-01
1.16600E+03	-1.49500882E+01	1.33943716E+06	2.23121755E+05	1.15388627E-01	-2.16126841E+00	1.10926192E-01
1.16800E+03	-1.90507698E+01	1.78562293E+06	2.23065040E+05	1.15391753E-01	-1.93941190E+00	1.10930452E-01
1.17000E+03	-2.27077292E+01	2.23170141E+06	2.23014462E+05	1.15395770E-01	-1.71754609E+00	1.10935481E-01
1.18000E+03	-3.43358828E+01	4.46091404E+06	2.22853638E+05	1.15429234E-01	-6.08023902E-01	1.10972162E-01
1.19000E+03	-3.48666591E+01	6.68928578E+06	2.22846297E+05	1.15484985E-01	5.01961192E-01	1.11028059E-01
1.20000E+03	-2.42944683E+01	8.91835184E+06	2.22992517E+05	1.15563022E-01	1.61260133E+00	1.11103172E-01
1.20600E+03	-1.26186849E+01	1.02567637E+07	2.23154000E+05	1.15620547E-01	2.27937979E+00	1.11157467E-01
1.21000E+03	-2.54024430E+00	9.35975712E+06	-2.24176785E+05	1.15646702E-01	2.75985522E+00	1.20130238E-01
1.21200E+03	3.21973431E+00	8.91148210E+06	-2.24097121E+05	1.15658883E-01	3.00012640E+00	1.20140826E-01
1.22000E+03	3.10656589E+01	7.12017473E+06	-2.23711995E+05	1.15701633E-01	3.96140099E+00	1.20175873E-01
1.23000E+03	7.66889964E+01	4.88607125E+06	-2.23080996E+05	1.15741650E-01	5.16331188E+00	1.20203270E-01
1.24000E+03	1.34332508E+02	2.65910896E+06	-2.22283751E+05	1.15766796E-01	6.36540573E+00	1.20212471E-01
1.24200E+03	1.47303744E+02	-3.43868969E+05	-4.72080666E+03	1.15769192E-01	6.60576496E+00	1.15863608E-01

\$ASQ01

60 SECOND BURN

N=5,WOSQ=0.,DWOS=10.,

H=0.,CODEI=1,CODEII=1,

P=0,ACC=0.,BEAM=2.,

OUTST=-57.,-37.,-25.,0.,

25.,50.,75.,100.,125.,150.,175.,

200.,225.,250.,275.,300.,325.,

350.,375.,385.,400.,425.,450.,

475.,500.,525.,550.,575.,577.,

600.,625.,650.,675.,700.,725.,

750.,775.,800.,825.,850.,875.,900.,

925.,950.,975.,991.,1000.,1025.,

1050.,1075.,1100.,1125.,1133.,1160.,1190.,

t40,5

181

t=60

Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.05481600E+01	4.22226880E+02	5.74486813E+02	5.74215372E+02	5.16049005E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-2.35916022E-02	1.14408930E+01 -2.35916022E-02
-3.70000E+01	1.47600094E+02	8.33098286E+03	8.27265184E+02	-2.35730241E-02	1.09669026E+01 -2.37966093E-02
-2.50000E+01	2.77463051E+02	2.11475905E+04	1.30669540E+03	-2.34874649E-02	1.06769236E+01 -2.42561092E-02
0.	5.36787659E+02	6.58989300E+04	2.26406217E+03	-2.30330634E-02	1.00697949E+01 -2.41111882E-02
2.50000E+01	7.81021242E+02	1.33886241E+05	3.16570558E+03	-2.24343067E-02	9.47201585E+00 -2.33387941E-02
5.00000E+01	1.01056644E+03	2.23732767E+05	4.01311905E+03	-2.19661347E-02	8.89384928E+00 -2.28579389E-02
7.50000E+01	1.22583210E+03	3.34102948E+05	4.80782009E+03	-2.15579297E-02	8.32933247E+00 -2.24014069E-02
1.00000E+02	1.42710630E+03	4.63693212E+05	5.55085537E+03	-2.10351006E-02	7.77382919E+00 -2.20789349E-02
1.25000E+02	1.61463741E+03	6.11222704E+05	6.24314529E+03	-2.03298167E-02	7.23048091E+00 -2.14251054E-02
1.50000E+02	1.78879179E+03	7.75438710E+05	6.88604126E+03	-1.94193018E-02	6.70435691E+00 -2.06273792E-02
1.75000E+02	1.95016742E+03	9.55132064E+05	7.48177783E+03	-1.89049897E-02	6.20711109E+00 -1.96531675E-02
2.00000E+02	2.09926738E+03	1.14914982E+06	8.03219006E+03	-1.82793979E-02	5.72266386E+00 -1.90826169E-02
2.25000E+02	2.23644879E+03	1.35637476E+06	8.53859595E+03	-1.75343340E-02	5.25401272E+00 -1.83881936E-02
2.50000E+02	2.36215880E+03	1.57572632E+06	9.00264776E+03	-1.67799016E-02	4.80720180E+00 -1.72302529E-02
2.75000E+02	2.47705205E+03	1.80617487E+06	9.42676761E+03	-1.62243925E-02	4.38656544E+00 -1.64743335E-02
3.00000E+02	2.58163777E+03	2.04674778E+06	9.81284394E+03	-1.57252508E-02	3.98206227E+00 -1.59022448E-02
3.25000E+02	2.67628017E+03	2.29651124E+06	1.01622155E+04	-1.52606143E-02	3.59089021E+00 -1.53995044E-02
3.50000E+02	2.76129550E+03	2.55456242E+06	1.04760481E+04	-1.48185952E-02	3.21178214E+00 -1.49338521E-02
3.75000E+02	2.83694090E+03	4.17932771E+06	2.80788089E+04	-1.42208739E-02	2.84178627E+00 -1.44793819E-02
3.85000E+02	2.86464087E+03	4.46013108E+06	2.80818387E+04	-1.39695001E-02	2.69832680E+00 -1.42124226E-02
4.00000E+02	2.90353625E+03	4.88257129E+06	2.82413650E+04	-1.36118928E-02	2.48799269E+00 -1.38385490E-02
4.25000E+02	2.96147272E+03	5.59164821E+06	2.84789927E+04	-1.29990949E-02	2.14887984E+00 -1.33289037E-02
4.50000E+02	3.01111132E+03	6.30623718E+06	2.86825794E+04	-1.22712396E-02	1.82423406E+00 -1.26763608E-02
4.75000E+02	3.05285375E+03	7.02550694E+06	2.88537639E+04	-1.15145899E-02	1.51775041E+00 -1.18719120E-02
5.00000E+02	3.08716648E+03	7.74867163E+06	2.89944858E+04	-1.08997004E-02	1.22947940E+00 -1.12183211E-02
5.25000E+02	3.11446335E+03	8.47499155E+06	2.91064363E+04	-1.03965560E-02	9.56192860E-01 -1.06056813E-02
5.50000E+02	3.13508293E+03	9.20376546E+06	2.91909882E+04	-9.82235292E-03	6.94059433E-01 -1.02334936E-02
5.75000E+02	3.14932536E+03	9.93432255E+06	2.92493683E+04	-9.05066563E-03	4.47734423E-01 -9.46262856E-03
5.77000E+02	3.15020197E+03	9.99282491E+06	2.92529640E+04	-8.98638451E-03	4.28873333E-01 -9.39839809E-03
6.00000E+02	3.15765567E+03	1.06660318E+07	2.92835014E+04	-8.22001191E-03	2.21422253E-01 -8.63245559E-03

6.25000E+02	3.16059642E+03	1.13983133E+07	2.92955161E+04	-7.33032260E-03	1.66062163E-02	-7.74293550E-03
6.50000E+02	3.15870171E+03	1.21306422E+07	2.92876928E+04	-6.38157307E-03	-1.65230012E-01	-6.79407579E-03
6.75000E+02	3.15256454E+03	1.28485627E+07	2.72257982E+04	-5.37399096E-03	-3.22407154E-01	-5.75745291E-03
7.00000E+02	3.14283604E+03	1.34708590E+07	2.22832174E+04	-4.31189293E-03	-4.52350058E-01	-4.62574106E-03
7.25000E+02	3.13022073E+03	1.39505102E+07	1.58757941E+04	-3.20511539E-03	-5.53148948E-01	-3.42871812E-03
7.50000E+02	3.11546556E+03	1.42555957E+07	8.38255790E+03	-2.06651279E-03	-6.23392570E-01	-2.18457699E-03
7.75000E+02	3.09934157E+03	1.43638693E+07	1.97286445E+02	-9.48185288E-04	-6.62273831E-01	-9.50714601E-04
8.00000E+02	3.08261653E+03	1.42629343E+07	-8.29242855E+03	6.06296231E-05	-6.71943839E-01	1.55944894E-04
8.25000E+02	3.06598630E+03	1.39496482E+07	-1.67353100E+04	9.77765164E-04	-6.55320522E-01	1.17012505E-03
8.50000E+02	3.05007630E+03	1.34292387E+07	-2.48108790E+04	1.82918948E-03	-6.14362793E-01	2.10183651E-03
8.75000E+02	3.03546818E+03	1.27146300E+07	-3.22250755E+04	2.58852681E-03	-5.51551731E-01	2.91403262E-03
9.00000E+02	3.02266956E+03	1.18258197E+07	-3.85334710E+04	3.25397002E-03	-4.69737020E-01	3.61409592E-03
9.25000E+02	3.01212290E+03	1.08077455E+07	-4.26982964E+04	3.82163892E-03	-3.71923866E-01	4.16598002E-03
9.50000E+02	3.00418576E+03	9.70122037E+06	-4.56526130E+04	4.28803165E-03	-2.61524584E-01	4.65619788E-03
9.75000E+02	2.99915479E+03	8.53412854E+06	-4.75257998E+04	4.70264887E-03	-1.39618499E-01	5.08592145E-03
9.91000E+02	2.99758555E+03	7.76837654E+06	-4.81105526E+04	4.93979888E-03	-5.62738023E-02	5.32778721E-03
1.00000E+03	2.99729741E+03	7.33477615E+06	-4.82180273E+04	5.06337144E-03	-7.75743858E-03	5.45222650E-03
1.02500E+03	2.99884405E+03	6.13378234E+06	-4.76441807E+04	5.36902794E-03	1.32439453E-01	5.74124810E-03
1.05000E+03	3.00397761E+03	4.96369064E+06	-4.57360902E+04	5.61221927E-03	2.78953332E-01	5.96953248E-03
1.07500E+03	3.01283593E+03	3.85853206E+06	-4.24422846E+04	5.80256591E-03	4.30158225E-01	6.11929937E-03
1.10000E+03	3.02551568E+03	2.85342476E+06	-3.77270826E+04	5.94347214E-03	5.84510869E-01	6.21885231E-03
1.12500E+03	3.04206816E+03	1.98448152E+06	-3.14524126E+04	6.02381546E-03	7.39838760E-01	6.23148445E-03
1.13300E+03	3.04818635E+03	1.74265929E+06	-2.89762363E+04	6.04174733E-03	7.89707380E-01	6.23492224E-03
1.16000E+03	3.07178439E+03	1.08931181E+06	-1.99585414E+04	6.08569689E-03	9.58397908E-01	6.25924942E-03
1.19000E+03	3.10334321E+03	6.16864891E+05	-1.21429294E+04	6.11415064E-03	1.14530118E+00	6.20662990E-03
1.20600E+03	3.12246141E+03	4.47814444E+05	-9.22671721E+03	6.12360493E-03	1.24445590E+00	6.18951005E-03
1.21200E+03	3.13003966E+03	3.95262881E+05	-8.63364246E+03	6.13115265E-03	1.28162806E+00	6.20402848E-03
1.22500E+03	3.14722706E+03	2.86654059E+05	-8.06965283E+03	6.14449406E-03	1.36258680E+00	6.25684795E-03
1.24200E+03	3.17130682E+03	1.56100297E+05	-7.27956499E+03	6.15581377E-03	1.47093818E+00	6.56023405E-03
1.25000E+03	3.18328396E+03	9.94267638E+04	-6.88652519E+03	6.15890456E-03	1.52334649E+00	6.54148929E-03
1.26418E+03	3.20554090E+03	6.90345765E+03	-6.15613356E+03	6.16115557E-03	1.61584060E+00	6.50316299E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			2.00210700E+00		
1.26418E+03	3.20554090E+03	6.90345765E+03	-8.64283935E+02	6.16115557E-03	1.61584060E+00	6.20917135E-03
1.27500E+03	3.22338682E+03	6.98733379E+02	-2.78649855E+02	6.16126331E-03	1.68284978E+00	6.17674386E-03
1.28000E+03	3.23187818E+03	-6.73087141E-09	2.40684361E-09	6.16126686E-03	1.71369493E+00	6.16126686E-03

BEAM 2						
OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
2.05481600E+01	4.22226880E+02	2.12435233E-01	4.83876318E-01	3.18474723E-01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	6.31635706E-03	9.56436331E-01	6.31635706E-03
1.16200E+03	1.53335704E+00	4.72880031E+02	2.37495421E+02	6.31635753E-03	9.69059588E-01	6.31160762E-03
1.16400E+03	3.48409940E+00	9.50000093E+02	2.39629244E+02	6.31635895E-03	9.81682762E-01	6.31156637E-03
1.16600E+03	5.46008803E+00	1.43141542E+03	2.41790683E+02	6.31636133E-03	9.94305854E-01	6.31152552E-03
1.16800E+03	7.46132276E+00	1.91718124E+03	2.43979738E+02	6.31636468E-03	1.00692886E+00	6.31148508E-03
1.17000E+03	9.48780343E+00	2.40735278E+03	2.46196408E+02	6.31636900E-03	1.01955179E+00	6.31144507E-03
1.18000E+03	1.99988903E+01	4.92622942E+03	2.57693981E+02	6.31640557E-03	1.08266527E+00	6.31125169E-03
1.19000E+03	3.11411025E+01	7.56353360E+03	2.69881913E+02	6.31646792E-03	1.14577687E+00	6.31107028E-03
1.20000E+03	4.29144219E+01	1.03261688E+04	2.82760182E+02	6.31655726E-03	1.20888672E+00	6.31090206E-03
1.20600E+03	5.02813378E+01	1.20467806E+04	2.90818498E+02	6.31662436E-03	1.24675185E+00	6.31080799E-03
1.21000E+03	5.53188866E+01	1.18434710E+04	-4.80630081E+01	6.31665621E-03	1.27202247E+00	6.31761747E-03
1.21200E+03	5.78755667E+01	1.17501370E+04	-4.52663784E+01	6.31667193E-03	1.28465767E+00	6.31757726E-03
1.22000E+03	6.83549888E+01	1.14335629E+04	-3.38034414E+01	6.31673372E-03	1.33519762E+00	6.31740979E-03
1.23000E+03	8.20228318E+01	1.11697056E+04	-1.88528436E+01	6.31680898E-03	1.39837062E+00	6.31718604E-03
1.24000E+03	9.63223933E+01	1.10588094E+04	-3.21123937E+00	6.31688299E-03	1.46154129E+00	6.31694721E-03
1.24200E+03	9.92581098E+01	-1.93080413E-07	-4.49205902E-09	6.31689404E-03	1.47417514E+00	6.31689404E-03

t=60

Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.34944367E+01	1.89176602E+03	5.74486813E+02	5.74409919E+02	2.07808240E+02	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	3.23904648E-02	-8.53170232E+00	3.23904648E-02
-3.70000E+01	-1.07065022E+02	-2.75056108E+04	-2.71444703E+03	3.23289400E-02	-7.87676856E+00	3.30625744E-02
-2.50000E+01	-1.99119685E+02	-6.92971473E+04	-4.23721567E+03	3.20476673E-02	-7.46567539E+00	3.45401471E-02
0.	-3.74918759E+02	-2.12323035E+05	-7.14511218E+03	3.05721053E-02	-6.60102026E+00	3.39745396E-02
2.50000E+01	-5.29417346E+02	-4.23613897E+05	-9.70051845E+03	2.86601612E-02	-5.76909400E+00	3.14317379E-02
5.00000E+01	-6.63953963E+02	-6.94603723E+05	-1.19256846E+04	2.71925868E-02	-5.00107677E+00	2.98427389E-02
7.50000E+01	-7.79854877E+02	-1.01733048E+06	-1.38426731E+04	2.59370163E-02	-4.27714690E+00	2.83655555E-02
1.00000E+02	-8.78056717E+02	-1.38429602E+06	-1.54667220E+04	2.43614504E-02	-3.58303001E+00	2.70749104E-02
1.25000E+02	-9.59373119E+02	-1.78833634E+06	-1.68113526E+04	2.22778776E-02	-2.92804640E+00	2.52272377E-02
1.50000E+02	-1.02496155E+03	-2.22269275E+06	-1.78957013E+04	1.96420144E-02	-2.32665403E+00	2.27816111E-02
1.75000E+02	-1.07658391E+03	-2.68120232E+06	-1.87492733E+04	1.81835801E-02	-1.80741449E+00	2.00585074E-02
2.00000E+02	-1.11568926E+03	-3.15842959E+06	-1.93957399E+04	1.64463959E-02	-1.32622520E+00	1.83859698E-02
2.25000E+02	-1.14332345E+03	-3.64940661E+06	-1.98523985E+04	1.44208201E-02	-8.90678394E-01	1.64060600E-02
2.50000E+02	-1.16075081E+03	-4.14963894E+06	-2.01402011E+04	1.24110985E-02	-5.14731922E-01	1.34185983E-02
2.75000E+02	-1.16967308E+03	-4.65525005E+06	-2.02873571E+04	1.09634629E-02	-2.04906772E-01	1.15013612E-02
3.00000E+02	-1.17137832E+03	-5.16301418E+06	-2.03152455E+04	9.69052061E-03	6.40185346E-02	1.00569462E-02
3.25000E+02	-1.16678553E+03	-5.67014515E+06	-2.02390036E+04	8.53081944E-03	2.99528635E-01	8.80743190E-03
3.50000E+02	-1.15668073E+03	-6.17420515E+06	-2.00716144E+04	7.45094945E-03	5.05328648E-01	7.67177616E-03
3.75000E+02	-1.14184233E+03	-6.68583901E+06	-1.97364246E+04	6.13879693E-03	6.77173346E-01	6.20659597E-03
3.85000E+02	-1.13477174E+03	-6.85594643E+06	-1.93607797E+04	5.64272964E-03	7.36720554E-01	5.70640420E-03
4.00000E+02	-1.12311403E+03	-6.86829572E+06	-1.84636385E+04	4.98243816E-03	8.17168084E-01	5.03979261E-03
4.25000E+02	-1.10122727E+03	-6.84203272E+06	-1.67439382E+04	3.95657086E-03	9.30265435E-01	4.03467089E-03
4.50000E+02	-1.07683465E+03	-6.90510868E+06	-1.42954503E+04	2.86494501E-03	1.01760736E+00	2.95386380E-03
4.75000E+02	-1.05060252E+03	-6.91565229E+06	-1.18130994E+04	1.83139877E-03	1.07763882E+00	1.90338762E-03
5.00000E+02	-1.02316288E+03	-6.92955804E+06	-9.53086508E+03	1.06160154E-03	1.11492048E+00	1.11993836E-03
5.25000E+02	-9.95011956E+02	-6.94218475E+06	-7.47911770E+03	4.79877389E-04	1.13509933E+00	5.14301261E-04
5.50000E+02	-9.66526623E+02	-6.95350880E+06	-5.42675206E+03	-1.32709991E-04	1.14186311E+00	-7.26040665E-05
5.75000E+02	-9.38094127E+02	-6.96352307E+06	-3.74478300E+03	-9.05794557E-04	1.13030909E+00	-8.53051135E-04
5.77000E+02	-9.35835278E+02	-6.96426788E+06	-3.70326823E+03	-9.67981407E-04	1.12854023E+00	-9.15822700E-04
6.00000E+02	-9.10193509E+02	-6.97224088E+06	-3.23185114E+03	-1.68643074E-03	1.09914878E+00	-1.64091171E-03

6.25000E+02	-8.83320634E+02	-9.79698042E+06	-2.73777375E+03	-2.47358591E-03	1.04821141E+00	-2.43502572E-03
6.50000E+02	-8.57969984E+02	-9.85953066E+06	-2.27167142E+03	-3.26626549E-03	9.77354760E-01	-3.23427012E-03
6.75000E+02	-8.34660610E+02	-9.69205927E+06	2.80212020E+04	-4.06010051E-03	8.83394738E-01	-4.45476533E-03
7.00000E+02	-8.14136979E+02	-8.39261829E+06	7.47096168E+04	-4.79716878E-03	7.54158231E-01	-5.84941690E-03
7.25000E+02	-7.97251862E+02	-6.02567132E+06	1.13120508E+05	-5.38500739E-03	5.93145667E-01	-6.97825397E-03
7.50000E+02	-7.84704253E+02	-2.81899353E+06	1.41662180E+05	-5.74644399E-03	4.08298832E-01	-7.74168596E-03
7.75000E+02	-7.76960885E+02	9.66068190E+05	1.59269822E+05	-5.82518204E-03	2.11110580E-01	-7.86710283E-03
8.00000E+02	-7.74136821E+02	5.05119363E+06	1.65686974E+05	-5.61613769E-03	1.60423449E-02	-7.52058566E-03
8.25000E+02	-7.76036115E+02	9.16082732E+06	1.61355260E+05	-5.15412123E-03	-1.66379366E-01	-7.00877939E-03
8.50000E+02	-7.82277674E+02	1.30364909E+07	1.47149987E+05	-4.46357197E-03	-3.29892921E-01	-6.08060480E-03
8.75000E+02	-7.92283121E+02	1.64468115E+07	1.24386733E+05	-3.60740334E-03	-4.66253017E-01	-4.86383499E-03
9.00000E+02	-8.05313743E+02	1.91996795E+07	9.57548638E+04	-2.64052801E-03	-5.70990114E-01	-3.53543328E-03
9.25000E+02	-8.20551555E+02	2.12589476E+07	6.88575112E+04	-1.62691477E-03	-6.42521418E-01	-2.18221728E-03
9.50000E+02	-8.37154955E+02	2.26376393E+07	4.11640345E+04	-6.26641335E-04	-6.81939940E-01	-9.58609355E-04
9.75000E+02	-8.54353891E+02	2.33088515E+07	1.24769691E+04	4.20314958E-04	-6.89995582E-01	3.19694239E-04
9.91000E+02	-8.65307238E+02	2.33619132E+07	-5.79210908E+03	1.09987073E-03	-6.78264070E-01	1.14658129E-03
1.00000E+03	-8.71355793E+02	2.32642665E+07	-1.58761572E+04	1.48148135E-03	-6.65859314E-01	1.60951488E-03
1.02500E+03	-8.87351777E+02	2.25289989E+07	-4.25557921E+04	2.52332660E-03	-6.09793276E-01	2.85579373E-03
1.05000E+03	-9.01567410E+02	2.11612335E+07	-6.62688847E+04	3.48361358E-03	-5.23895787E-01	4.00133924E-03
1.07500E+03	-9.13294945E+02	1.92502093E+07	-8.58298998E+04	4.35821222E-03	-4.11124147E-01	4.99873386E-03
1.10000E+03	-9.21905474E+02	1.69130652E+07	-1.00196821E+05	5.12034297E-03	-2.75106903E-01	5.85170663E-03
1.12500E+03	-9.26909129E+02	1.42903455E+07	-1.08646476E+05	5.64060540E-03	-1.23178823E-01	6.35795909E-03
1.13300E+03	-9.27688657E+02	1.34150160E+07	-1.10061483E+05	5.77399403E-03	-7.17033107E-02	6.50773725E-03
1.16000E+03	-9.27172213E+02	1.04287759E+07	-1.09587735E+05	6.14884474E-03	1.12150364E-01	7.10178156E-03
1.19000E+03	-9.20582775E+02	7.20452807E+06	-1.03796307E+05	6.44931591E-03	3.27654263E-01	7.23981759E-03
1.20600E+03	-9.14411519E+02	5.57869987E+06	-9.96230196E+04	6.56355952E-03	4.43789917E-01	7.27515251E-03
1.21200E+03	-9.11616099E+02	4.99116698E+06	-9.77134419E+04	6.65821136E-03	4.88017037E-01	7.48300208E-03
1.22500E+03	-9.04613558E+02	3.72736612E+06	-9.66853026E+04	6.82904918E-03	5.89296967E-01	8.17519999E-03
1.24200E+03	-8.93259468E+02	2.09728132E+06	-9.50220577E+04	6.97860238E-03	7.54642018E-01	1.22576056E-02
1.25000E+03	-8.86830197E+02	1.34080918E+06	-9.40767634E+04	7.02025875E-03	8.52675878E-01	1.22467456E-02
1.26418E+03	-8.73511124E+02	2.02595264E+04	-9.21183210E+04	7.04944741E-03	1.02586105E+00	1.21671319E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			7.56606084E+00		
1.26418E+03	-8.73511124E+02	2.02595264E+04	-2.51758379E+03	7.04944741E-03	1.02586105E+00	7.18931318E-03
1.27500E+03	-8.61993180E+02	2.07079221E+03	-8.23984046E+02	7.04976467E-03	1.10314880E+00	7.09554156E-03
1.28000E+03	-8.56389027E+02	-1.55882921E-08	-2.39698066E-10	7.04977521E-03	1.13851271E+00	7.04977521E-03

E6012

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
4.34944367E+01	1.89176602E+03	2.12435233E-01	2.89330083E-01	4.37277825E-02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	7.69464065E-03	1.01053565E-01	7.69464065E-03
1.16200E+03	1.76011171E-01	2.66427242E+03	1.33268158E+03	7.69464331E-03	1.16389562E-01	7.66798968E-03
1.16400E+03	4.24126263E-01	5.33082652E+03	1.33389758E+03	7.69465131E-03	1.31725525E-01	7.66797336E-03
1.16600E+03	7.02913249E-01	7.99996294E+03	1.33526390E+03	7.69466464E-03	1.47061457E-01	7.66795936E-03
1.16800E+03	1.01237207E+00	1.06719823E+04	1.33678054E+03	7.69468331E-03	1.62397364E-01	7.66794770E-03
1.17000E+C3	1.35250269E+00	1.33471853E+04	1.33844750E+03	7.69470733E-03	1.77733250E-01	7.66793838E-03
1.18000E+03	3.51323167E+00	2.67814767E+04	1.34903712E+03	7.69490788E-03	2.54412528E-01	7.66792714E-03
1.19000E+03	6.44075387E+00	4.03404544E+04	1.36338476E+03	7.69524337E-03	3.31091992E-01	7.66797568E-03
1.20000E+03	1.01350741E+01	5.40616986E+04	1.38149043E+03	7.69571523E-03	4.07772246E-01	7.66808542E-03
1.20600E+03	1.27197337E+01	6.23879666E+04	1.39415771E+03	7.69606454E-03	4.53781035E-01	7.66818139E-03
1.21000E+03	1.45964430E+01	6.19881207E+04	-9.53123321E+01	7.69623037E-03	4.84573622E-01	7.69813662E-03
1.21200E+03	1.55809865E+01	6.18022961E+C4	-9.04871354E+01	7.69631290E-03	4.99969881E-01	7.69812264E-03
1.22000E+03	1.98270847E+01	6.11600289E+04	-6.96772280E+01	7.69664072E-03	5.61554544E-01	7.69803427E-03
1.23000E+03	2.58275291E+01	6.06071521E+04	-4.02693604E+01	7.69704645E-03	6.38534040E-01	7.69785184E-03
1.24000E+03	3.25977581E+01	6.03672173E+04	-7.08881867E+00	7.69744951E-03	7.15511320E-01	7.69759129E-03
1.24200E+03	3.40441759E+01	1.50429729E-08	8.37694700E-10	7.69750988E-03	7.30906435E-01	7.69750988E-03

460,2 187

t=60

Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
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5.35874387E+01	2.87161359E+03	5.74486813E+02	5.74158008E+02	4.27468052E+02	0.
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STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.			7.19405792E-02	-1.59076002E+01	7.19405792E-02
-3.70000E+01	-1.97262325E+02	-7.74556881E+04	-7.62345423E+03			7.17670988E-02	-1.44487283E+01	7.38274918E-02
-2.50000E+01	-3.65090986E+02	-1.94502052E+05	-1.18378001E+04			7.09765072E-02	-1.35227152E+01	7.79399191E-02
0.	-6.78679407E+02	-5.91427755E+05	-1.97115945E+04			6.68516597E-02	-1.15725268E+01	7.62381333E-02
2.50000E+01	-9.44437811E+02	-1.17006205E+06	-2.63837618E+04			6.15479382E-02	-9.71683898E+00	6.90861558E-02
5.00000E+01	-1.16614700E+03	-1.90142587E+06	-3.19497161E+04			5.75120948E-02	-8.04005227E+00	6.46120317E-02
7.50000E+01	-1.34751121E+03	-2.75911140E+06	-3.65030052E+04			5.40902945E-02	-6.48611845E+00	6.04943305E-02
1.00000E+02	-1.49114686E+03	-3.71867472E+06	-4.01082267E+04			4.98384741E-02	-5.01603339E+00	5.68750051E-02
1.25000E+02	-1.59933188E+03	-4.75709418E+06	-4.28228658E+04			4.42697494E-02	-3.65465462E+00	5.17825329E-02
1.50000E+02	-1.67525399E+03	-5.85305586E+06	-4.47269345E+04			3.72946040E-02	-2.43982143E+00	4.51414346E-02
1.75000E+02	-1.72361186E+03	-6.98769839E+06	-4.59398862E+04			3.34744543E-02	-1.44033671E+00	3.80684429E-02
2.00000E+02	-1.74822546E+03	-8.14507646E+06	-4.65564203E+04			2.89714159E-02	-5.42590117E-01	3.36270579E-02
2.25000E+02	-1.75187081E+03	-9.31112652E+06	-4.66462360E+04			2.37762277E-02	2.34806575E-01	2.84408513E-02
2.50000E+02	-1.73784730E+03	-1.04736789E+07	-4.62923657E+04			1.86741939E-02	8.59304028E-01	2.09899379E-02
2.75000E+02	-1.71041625E+03	-1.16229612E+07	-4.56020335E+04			1.50396199E-02	1.32068727E+00	1.62487107E-02
3.00000E+02	-1.67275816E+03	-1.27516490E+07	-4.46553240E+04			1.18782896E-02	1.68092987E+00	1.26837366E-02
3.25000E+02	-1.62714044E+03	-1.38540657E+07	-4.35089347E+04			9.02924658E-03	1.95899672E+00	9.62389608E-03
3.50000E+02	-1.57548806E+03	-1.49258353E+07	-4.22111294E+04			6.40464926E-03	2.16464117E+00	6.86905359E-03
3.75000E+02	-1.51979147E+03	-1.67564997E+07	3.92398741E+04			3.68999252E-03	2.28130818E+00	3.32873008E-03
3.85000E+02	-1.49683369E+03	-1.63640157E+07	3.92569576E+04			2.72596009E-03	2.30982827E+00	2.38636703E-03
4.00000E+02	-1.46198239E+03	-1.57678798E+07	4.02296872E+04			1.49340030E-03	2.33615527E+00	1.17052961E-03
4.25000E+02	-1.40343695E+03	-1.47417225E+07	4.18634392E+04			-2.95883423E-04	2.34105999E+00	-7.80694531E-04
4.50000E+02	-1.34535593E+03	-1.36748164E+07	4.34842172E+04			-2.03368464E-03	2.29907360E+00	-2.64786850E-03
4.75000E+02	-1.28889192E+03	-1.25678898E+07	4.50599546E+04			-3.53148630E-03	2.21357880E+00	-4.08950432E-03
5.00000E+02	-1.23495073E+03	-1.14224097E+07	4.65650766E+04			-4.53545820E-03	2.09859628E+00	-5.04716234E-03
5.25000E+02	-1.18413923E+03	-1.02403662E+07	4.79827765E+04			-5.21098650E-03	1.96426596E+00	-5.55573539E-03
5.50000E+02	-1.13686536E+03	-9.02408943E+06	4.93018243E+04			-5.82721301E-03	1.81351472E+00	-6.52160490E-03
5.75000E+02	-1.09364973E+03	-7.77622048E+06	5.05077024E+04			-6.50484748E-03	1.64157868E+00	-7.21622357E-03
6.00000E+02	-1.09038106E+03	-7.67511375E+06	5.05988917E+04			-6.55469060E-03	1.62709500E+00	-7.26735104E-03
6.25000E+02	-1.05493615E+03	-6.49975212E+06	5.15879081E+04			-7.08067305E-03	1.45356678E+00	-7.80726330E-03

6.25000E+02	-1.02109652E+03	-5.19795876E+06	5.25321393E+04	-7.55251359E-03	1.25209811E+00	-8.29240288E-03
6.50000E+02	-9.92432605E+02	-3.87434932E+06	5.33319399E+04	-7.91846685E-03	1.33984608E+00	-8.66962093E-03
6.75000E+02	-9.69210422E+02	-2.20717679E+06	9.77685321E+04	-8.17178325E-03	8.14966097E-01	-9.54880483E-03
7.00000E+02	-9.51940489E+02	1.02747915E+06	1.57391886E+05	-8.22937181E-03	5.63848722E-01	-1.04461589E-02
7.25000E+02	-9.41158183E+02	5.47524803E+06	1.94604309E+05	-7.97341745E-03	2.97920967E-01	-1.07143232E-02
7.50000E+02	-9.37025655E+02	1.05657748E+07	2.08842503E+05	-7.32899182E-03	3.40870694E-02	-1.02704355E-02
7.75000E+02	-9.39263713E+02	1.57334961E+07	2.01087065E+05	-6.30599922E-03	-2.07854133E-01	-8.88403852E-03
8.00000E+02	-9.47063141E+02	2.04600633E+07	1.74127124E+05	-5.03024437E-03	-4.09700299E-01	-7.03170556E-03
8.25000E+02	-9.59285480E+02	2.43124359E+07	1.31871785E+05	-3.57086936E-03	-5.62015931E-01	-5.08663700E-03
8.50000E+02	-9.74664911E+02	2.69627818E+07	7.87360439E+04	-1.97202980E-03	-6.60859715E-01	-2.83726105E-03
8.75000E+02	-9.91808153E+02	2.81985001E+07	1.95213547E+04	-3.65895038E-04	-7.02790827E-01	-5.63080439E-04
9.00000E+02	-1.00931784E+03	2.79305140E+07	-3.90741419E+04	1.16230672E-03	-6.90043999E-01	1.52548562E-03
9.25000E+02	-1.02589461E+03	2.63815427E+07	-8.35602669E+04	2.52545837E-03	-6.29653713E-01	3.19933149E-03
9.50000E+02	-1.04046254E+03	2.38183669E+07	-1.20456723E+05	3.66986151E-03	-5.31298553E-01	4.64128670E-03
9.75000E+02	-1.05214242E+03	2.04197288E+07	-1.50041681E+05	4.67807618E-03	-3.99218906E-01	5.88808973E-03
9.91000E+02	-1.05773790E+03	1.79002842E+07	-1.64216465E+05	5.23600752E-03	-2.99490463E-01	6.56033385E-03
1.00000E+03	-1.06016082E+03	1.63936989E+07	-1.70350622E+05	5.51666986E-03	-2.38935055E-01	6.89046519E-03
1.02500E+03	-1.06388919E+03	1.19927966E+07	-1.79803677E+05	6.16194290E-03	-5.70802382E-02	7.56665912E-03
1.05000E+03	-1.06289598E+03	7.50325059E+06	-1.77305400E+05	6.58926000E-03	1.37794895E-01	7.97445844E-03
1.07500E+03	-1.05694506E+03	3.23231415E+06	-1.62256247E+05	6.82029188E-03	3.38303484E-01	8.03115940E-03
1.10000E+03	-1.04599043E+03	-5.03917702E+05	-1.34542841E+05	6.87589632E-03	5.37442519E-01	7.85796086E-03
1.12500E+03	-1.03016580E+03	-3.39015111E+06	-9.37184914E+04	6.80963511E-03	7.27450814E-01	7.42842467E-03
1.13300E+03	-1.02411070E+03	-4.07408625E+06	-7.70492571E+04	6.77362706E-03	7.86324056E-01	7.28728877E-03
1.16000E+03	-1.00029254E+03	-5.27327827E+06	-1.52054361E+04	6.62269863E-03	9.76093815E-01	6.75491981E-03
1.19000E+03	-9.68080573E+02	-4.85737603E+06	3.89037360E+04	6.44501211E-03	1.16883247E+00	6.14872538E-03
1.20600E+03	-9.48604823E+02	-4.05992438E+06	5.91142131E+04	6.36477122E-03	1.26542265E+00	5.94252684E-03
1.21200E+03	-9.40907086E+02	-3.68481722E+06	6.33808285E+04	6.29539994E-03	1.30048941E+00	5.76040784E-03
1.22500E+03	-9.23533783E+02	-2.83587900E+06	6.72599076E+04	6.16743017E-03	1.37232647E+00	5.23096954E-03
1.24200E+03	-8.99568284E+02	-1.64731907E+06	7.26158043E+04	6.05183582E-03	1.44076555E+00	2.01762447E-03
1.25000E+03	-8.87980453E+02	-1.05606536E+06	7.52022141E+04	6.01902742E-03	1.45619205E+00	1.84112664E-03
1.26418E+03	-8.67160256E+02	4.31632674E+04	7.98497976E+04	5.99699584E-03	1.48026153E+00	1.56089597E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-4.74231881E+00		
1.26418E+03	-8.67160256E+02	4.31632674E+04	-5.39955315E+03	5.99699584E-03	1.48026153E+00	6.29697101E-03
1.27500E+03	-8.50781100E+02	4.37298937E+03	-1.74357332E+03	5.99766970E-03	1.54730883E+00	6.09453489E-03
1.28000E+03	-8.42968978E+02	1.14596079E-08	-4.69429353E-11	5.99769194E-03	1.57754021E+00	5.99769194E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.35874387E+01	2.87161359E+03	2.12435233E-01	5.41240683E-01	3.36639597E-01	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	0.	0.	7.02162481E-03	9.61199977E-01	7.02162481E-03
1.16200E+03	1.54227952E+00	3.58889177E+03	1.80166594E+03	7.02162839E-03	9.75171451E-01	6.98559508E-03		
1.16400E+03	3.50659341E+00	7.20680236E+03	1.81627929E+03	7.02163919E-03	9.89142360E-01	6.98531360E-03		
1.16600E+03	5.49884856E+00	1.08541475E+04	1.83110050E+03	7.02165724E-03	1.00311271E+00	6.98503523E-03		
1.16800E+03	7.51904385E+00	1.45313429E+04	1.84612956E+03	7.02168262E-03	1.01708250E+00	6.98476003E-03		
1.17000E+03	9.56717818E+00	1.82388043E+04	1.86136648E+03	7.02171539E-03	1.03105175E+00	6.98448806E-03		
1.18000E+03	2.02268978E+01	3.72446498E+04	1.94066854E+03	7.02199214E-03	1.10089001E+00	6.98317877E-03		
1.19000E+03	3.15849361E+01	5.70694921E+04	2.02516569E+03	7.02246301E-03	1.17071563E+00	6.98195970E-03		
1.20000E+03	4.36411712E+01	7.77652775E+04	2.11485701E+03	7.02313644E-03	1.24052954E+00	6.98083930E-03		
1.20600E+03	5.12099997E+01	9.06224077E+04	2.17116465E+03	7.02364143E-03	1.28241269E+00	6.98021814E-03		
1.21000E+03	5.63958985E+01	8.91899222E+04	-3.38761625E+02	7.02388115E-03	1.31053638E+00	7.03065638E-03		
1.21200E+03	5.90310324E+01	8.85319679E+04	-3.19157774E+02	7.02399962E-03	1.32459742E+00	7.03038278E-03		
1.22000E+03	6.98527720E+01	8.62985039E+04	-2.38650379E+02	7.02446555E-03	1.38083596E+00	7.02923856E-03		
1.23000E+03	8.40125683E+01	8.44343457E+04	-1.33309799E+02	7.02503408E-03	1.45112075E+00	7.02770027E-03		
1.24000E+03	9.88751337E+01	8.36497352E+04	-2.27410300E+01	7.02559374E-03	1.52138959E+00	7.02604856E-03		
1.24200E+03	1.01931965E+02	5.62991208E-09	-4.03955825E-09	7.02567738E-03	1.53544133E+00	7.02567738E-03		

t60,35
190

t=60
Mode 4

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
6.86438894E+01	4.71198355E+03	5.74486813E+02	5.73638928E+02	5.44381398E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	9.40158842E-02	-1.69889178E+01	9.40158842E-02
-3.70000E+01	-2.07126707E+02	-1.34771423E+05	-1.32140751E+04	9.37134696E-02	-1.50736940E+01	9.72848412E-02
-2.50000E+01	-3.80592621E+02	-3.36839429E+05	-2.03621329E+04	9.23415128E-02	-1.38372917E+01	1.04319238E-01
0.	-6.93748201E+02	-1.01278753E+06	-3.32643994E+04	8.52404143E-02	-1.12303075E+01	1.01080605E-01
2.50000E+01	-9.43427697E+02	-1.97823162E+06	-4.35494513E+04	7.62145765E-02	-8.79371053E+00	8.86572769E-02
5.00000E+01	-1.13623886E+03	-3.17081013E+06	-5.14909754E+04	6.94367390E-02	-6.66564230E+00	8.08791780E-02
7.50000E+01	-1.27854673E+03	-4.53545744E+06	-5.73527792E+04	6.37694764E-02	-4.74786546E+00	7.38313675E-02
1.00000E+02	-1.37484321E+03	-6.02263162E+06	-6.13167751E+04	5.68342265E-02	-2.97533351E+00	6.75915555E-02
1.25000E+02	-1.42904641E+03	-7.58681573E+06	-6.35452969E+04	4.78867450E-02	-1.38761422E+00	5.90350427E-02
1.50000E+02	-1.44650645E+03	-9.18725238E+06	-6.42587459E+04	3.68531214E-02	-4.31994581E-02	4.81265856E-02
1.75000E+02	-1.43473738E+03	-1.07897857E+07	-6.37706247E+04	3.09069670E-02	9.66042562E-01	3.72840295E-02
2.00000E+02	-1.39973398E+03	-1.23677937E+07	-6.23246968E+04	2.40130349E-02	1.81230050E+00	3.02455045E-02
2.25000E+02	-1.34589278E+03	-1.38995405E+07	-6.01021163E+04	1.61926170E-02	2.46994551E+00	2.22028286E-02
2.50000E+02	-1.27830254E+03	-1.53681554E+07	-5.73131506E+04	8.63670522E-03	2.89791157E+00	1.15037565E-02
2.75000E+02	-1.20312389E+03	-1.67626440E+07	-5.42121375E+04	3.34818636E-03	3.09582664E+00	4.78556512E-03
3.00000E+02	-1.12485142E+03	-1.80777196E+07	-5.09846048E+04	-1.17290328E-03	3.15038057E+00	-2.53295197E-04
3.25000E+02	-1.04668815E+03	-1.93119209E+07	-4.77619948E+04	-5.17843050E-03	3.08943226E+00	-4.52565317E-03
3.50000E+02	-9.71322188E+02	-2.04667856E+07	-4.46548976E+04	-8.80730503E-03	2.92807973E+00	-8.31601450E-03
3.75000E+02	-9.01518686E+02	-1.08971677E+07	1.34822935E+05	-1.08767947E-02	2.64812115E+00	-1.21180439E-02
3.85000E+02	-8.75655637E+02	-9.54877922E+06	1.34854510E+05	-1.14721800E-02	2.52425999E+00	-1.26387415E-02
4.00000E+02	-8.39246113E+02	-7.51329182E+06	1.36521593E+05	-1.21288887E-02	2.32994415E+00	-1.32245676E-02
4.25000E+02	-7.85260409E+02	-4.06853610E+06	1.38993152E+05	-1.28122716E-02	1.98577407E+00	-1.44219202E-02
4.50000E+02	-7.40161998E+02	-5.67029135E+05	1.41057715E+05	-1.30948753E-02	1.61928539E+00	-1.50872159E-02
4.75000E+02	-7.04365287E+02	2.98078584E+06	1.42696230E+05	-1.29690360E-02	1.24581517E+00	-1.47361420E-02
5.00000E+02	-6.77761731E+02	6.56427255E+06	1.43913823E+05	-1.25789489E-02	8.84578389E-01	-1.41604195E-02
5.25000E+02	-6.59987830E+02	1.01731073E+07	1.44727208E+05	-1.20646103E-02	5.40042691E-01	-1.31044531E-02
5.50000E+02	-6.50626268E+02	1.37974404E+07	1.45155312E+05	-1.12734071E-02	2.05430568E-01	-1.33178481E-02
5.75000E+02	-6.49512522E+02	1.74277090E+07	1.45205541E+05	-1.00143369E-02	-1.12406716E-01	-1.20594854E-02
5.77000E+02	-6.49761341E+02	1.77181091E+07	1.45194149E+05	-9.90096328E-03	-1.36412470E-01	-1.19459513E-02
6.00000E+02	-6.55919967E+02	2.10548455E+07	1.44911450E+05	-8.46257149E-03	-3.95063913E-01	-1.05035778E-02

6.25000E+02	-6.68869352E+02	2.46707806E+07	1.44317551E+05	-6.61869637E-03	-6.35115951E-01	-8.65133794E-03
6.50000E+02	-6.87206599E+02	2.82686637E+07	1.43476835E+05	-4.48390000E-03	-8.25177308E-01	-6.50470049E-03
6.75000E+02	-7.09542580E+02	3.13046870E+07	6.73516794E+04	-2.06822165E-03	-9.50365646E-01	-3.01683685E-03
7.00000E+02	-7.33720117E+02	3.12791559E+07	-6.98537322E+04	4.78399520E-04	-9.69874471E-01	1.46225490E-03
7.25000E+02	-7.56997416E+02	2.78548006E+07	-2.01948208E+05	2.88505157E-03	-8.79024920E-01	5.72939252E-03
7.50000E+02	-7.76738681E+02	2.13497026E+07	-3.13974734E+05	4.88794590E-03	-6.89147129E-01	9.31012525E-03
7.75000E+02	-7.90752846E+02	1.24288669E+07	-3.93451699E+05	6.22777347E-03	-4.26140132E-01	1.12720260E-02
8.00000E+02	-7.97736025E+02	2.01008710E+06	-4.33050954E+05	6.74635958E-03	-1.31094827E-01	1.17239568E-02
8.25000E+02	-7.97347475E+02	-8.87481463E+06	-4.30835679E+05	6.52317633E-03	1.61362124E-01	1.14753106E-02
8.50000E+02	-7.89976109E+02	-1.91970153E+07	-3.88633648E+05	5.64766270E-03	4.28867872E-01	9.91836214E-03
8.75000E+02	-7.76373913E+02	-2.80173558E+07	-3.11914173E+05	4.27327109E-03	6.44822628E-01	7.42391930E-03
9.00000E+02	-7.58246329E+02	-3.45795853E+07	-2.12680639E+05	2.57061963E-03	7.94073558E-01	4.55828915E-03
9.25000E+02	-7.37270638E+02	-3.87444480E+07	-1.20423226E+05	7.29316323E-04	8.72336881E-01	1.70047137E-03
9.50000E+02	-7.15227651E+02	-4.06120214E+07	-2.87953523E+04	-1.08292310E-03	8.83154709E-01	-8.50702519E-04
9.75000E+02	-6.93717406E+02	-4.02026156E+07	6.06225227E+04	-2.92809335E-03	8.29676397E-01	-3.41698466E-03
9.91000E+02	-6.80968003E+02	-3.88027028E+07	1.13620694E+05	-4.07931566E-03	7.62273243E-01	-4.99561157E-03
1.00000E+03	-6.74327159E+02	-3.76546118E+07	1.41206951E+05	-4.70521376E-03	7.13469985E-01	-5.84397949E-03
1.02500E+03	-6.58575075E+02	-3.32683050E+07	2.06692984E+05	-6.32117616E-03	5.39877062E-01	-7.93596510E-03
1.05000E+03	-6.47767625E+02	-2.74914496E+07	2.51642011E+05	-7.65773787E-03	3.19480540E-01	-9.62369108E-03
1.07500E+03	-6.42930311E+02	-2.08935310E+07	2.71774559E+05	-8.70519130E-03	6.41271161E-02	-1.07333597E-02
1.10000E+03	-6.44772031E+02	-1.41342411E+07	2.64168152E+05	-9.44230028E-03	-2.13302398E-01	-1.13705350E-02
1.12500E+03	-6.53617257E+02	-7.93001364E+06	2.26611799E+05	-9.80908677E-03	-4.94841238E-01	-1.13053231E-02
1.13300E+03	-6.57937111E+02	-6.19299513E+06	2.07099305E+05	-9.87699953E-03	-5.85122275E-01	-1.12576616E-02
1.16000E+03	-6.77819991E+02	-1.75422450E+06	1.23197365E+05	-9.99655470E-03	-8.87073054E-01	-1.10678361E-02
1.19000E+03	-7.09283570E+02	6.57777218E+05	3.96905804E+04	-1.00077728E-02	-1.20719935E+00	-1.03100520E-02
1.20600E+03	-7.29901056E+02	9.91663579E+05	4.66034806E+03	-9.99219013E-03	-1.36969128E+00	-1.00254783E-02
1.21200E+03	-7.38298402E+02	9.70337946E+05	-5.10285815E+03	-9.97459243E-03	-1.42942404E+00	-9.93151965E-03
1.22500E+03	-7.57714128E+02	8.58439462E+05	-1.22140538E+04	-9.93844563E-03	-1.55761060E+00	-9.76838919E-03
1.24200E+03	-7.85565900E+02	5.65483319E+05	-2.24177119E+04	-9.90111109E-03	-1.71691904E+00	-8.65568265E-03
1.25000E+03	-7.99573508E+02	3.65752978E+05	-2.75481057E+04	-9.88974105E-03	-1.78498310E+00	-8.35929073E-03
1.26418E+03	-8.25699506E+02	-9.20302767E+04	-3.71186367E+04	-9.88336587E-03	-1.89971873E+00	-7.82121939E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			1.64753551E+00		
1.26418E+03	-8.25699506E+02	-9.20302767E+04	1.14787464E+04	-9.88336587E-03	-1.89971873E+00	-1.05210740E-02
1.27500E+03	-8.46857900E+02	-9.35976535E+03	3.72866487E+03	-9.88480459E-03	-2.01125977E+00	-1.00919526E-02
1.28000E+03	-8.57039059E+02	5.65668776E-09	2.55220324E-11	-9.88485221E-03	-2.06120396E+00	-9.88485221E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.86438894E+01	4.71198355E+03	2.12435233E-01	1.06032088E+00	4.07520876E-01	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-1.25376997E-02	-8.42628069E-01 -1.25376997E-02
1.16200E+03	-1.36464040E+00	-1.06875710E+04	-5.35427398E+03	-1.25377104E-02	-8.67489724E-01 -1.24306249E-02
1.16400E+03	-3.12448081E+00	-2.14175006E+04	-5.37575672E+03	-1.25377425E-02	-8.92350575E-01 -1.24302274E-02
1.16600E+03	-4.93404214E+00	-3.21910025E+04	-5.39784642E+03	-1.25377961E-02	-9.17210640E-01 -1.24298392E-02
1.16800E+03	-6.79332282E+00	-4.30092908E+04	-5.42054305E+03	-1.25378713E-02	-9.42069938E-01 -1.24294605E-02
1.17000E+03	-8.70232135E+00	-5.38735793E+04	-5.44384660E+03	-1.25379682E-02	-9.66928488E-01 -1.24290913E-02
1.18000E+03	-1.89930313E+01	-1.08927507E+05	-5.56946747E+03	-1.25387811E-02	-1.09121070E+00 -1.24273918E-02
1.19000E+03	-3.05264827E+01	-1.65313497E+05	-5.71025875E+03	-1.25401512E-02	-1.21547717E+00 -1.24259460E-02
1.20000E+03	-4.33025308E+01	-2.23183244E+05	-5.86621867E+03	-1.25420924E-02	-1.33973051E+00 -1.24247680E-02
1.20600E+03	-5.15645561E+01	-2.58680395E+05	-5.96707496E+03	-1.25435376E-02	-1.41427735E+00 -1.24241962E-02
1.21000E+03	-5.73221272E+01	-2.55936804E+05	6.50551364E+02	-1.25442237E-02	-1.46450775E+00 -1.25572348E-02
1.21200E+03	-6.02762569E+01	-2.54671661E+05	6.14489678E+02	-1.25445641E-02	-1.48962184E+00 -1.25568539E-02
1.22000E+03	-7.25950337E+01	-2.50350715E+05	4.64111766E+02	-1.25459103E-02	-1.59007017E+00 -1.25551926E-02
1.23000E+03	-8.91234566E+01	-2.46705657E+05	2.62345814E+02	-1.25475661E-02	-1.71561047E+00 -1.25528130E-02
1.24000E+03	-1.06907158E+02	-2.45154877E+05	4.52564111E+01	-1.25492044E-02	-1.84112535E+00 -1.25501095E-02
1.24200E+03	-1.10614509E+02	3.78216231E-10	6.90180677E-10	-1.25494495E-02	-1.86622497E+00 -1.25494495E-02

t604
193

t=60
Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.10098718E+02	1.21217277E+04	5.74486813E+02	5.70173930E+02	4.30113275E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-7.22855836E-02	9.00410241E+00 -7.22855836E-02
-3.70000E+01	1.05059701E+02	1.80472488E+05	1.75198172E+04	-7.18786734E-02	7.51167586E+00 -7.66137592E-02
-2.50000E+01	1.89145378E+02	4.45488931E+05	2.64360402E+04	-7.00542443E-02	6.50260354E+00 -8.56048562E-02
0.	3.24857937E+02	1.29799095E+06	4.08200860E+04	-6.08153887E-02	4.37813782E+00 -8.02535248E-02
2.50000E+01	4.10060380E+02	2.44176110E+06	4.98435735E+04	-4.94560872E-02	2.50357191E+00 -6.36971082E-02
5.00000E+01	4.53701647E+02	3.75370702E+06	5.44606378E+04	-4.12570889E-02	1.03151019E+00 -5.33594529E-02
7.50000E+01	4.63985761E+02	5.13540410E+06	5.55463908E+04	-3.46875710E-02	-1.73134367E-01 -4.44325518E-02
1.00000E+02	4.46649444E+02	6.50656767E+06	5.36979000E+04	-2.70232960E-02	-1.18883566E+00 -3.64439802E-02
1.25000E+02	4.06678468E+02	7.80023790E+06	4.94473781E+04	-1.75992525E-02	-1.97712477E+00 -2.62742312E-02
1.50000E+02	3.50412182E+02	8.96448248E+06	4.34670645E+04	-6.55341469E-03	-2.48647879E+00 -1.41792155E-02
1.75000E+02	2.85569731E+02	9.96621906E+06	3.65858043E+04	-9.10738609E-04	-2.68119673E+00 -4.56931904E-03
2.00000E+02	2.17909027E+02	1.07912651E+07	2.94050366E+04	5.27599463E-03	-2.71015874E+00 2.33549097E-03
2.25000E+02	1.51735635E+02	1.14377709E+07	2.23813060E+04	1.19004953E-02	-2.56090474E+00 9.66236470E-03
2.50000E+02	9.16153735E+01	1.19156772E+07	1.60007394E+04	1.79506242E-02	-2.22259920E+00 1.71501981E-02
2.75000E+02	4.19830793E+01	1.22471624E+07	1.07340131E+04	2.19349582E-02	-1.73415941E+00 2.16503569E-02
3.00000E+02	5.81143190E+00	1.24643014E+07	6.89555148E+03	2.51457705E-02	-1.14914330E+00 2.50213956E-02
3.25000E+02	-1.47620768E+01	1.26057363E+07	4.71116710E+03	2.78336537E-02	-4.88221947E-01 2.77692648E-02
3.50000E+02	-1.80071331E+01	1.27151780E+07	4.36396136E+03	3.01443865E-02	2.35834488E-01 3.00963745E-02
3.75000E+02	-3.46335158E+00	-4.15097088E+07	4.74518063E+04	2.40126026E-02	9.05834493E-01 2.35757369E-02
3.85000E+02	6.71908443E+00	-4.10350365E+07	4.74838281E+04	2.16101112E-02	1.12959149E+00 2.11993514E-02
4.00000E+02	2.58834534E+01	-4.03064657E+07	4.97455858E+04	1.84908775E-02	1.42346305E+00 1.80916353E-02
4.25000E+02	6.65598726E+01	-3.90052794E+07	5.45408941E+04	1.38410322E-02	1.81423029E+00 1.32094063E-02
4.50000E+02	1.15500483E+02	-3.75713131E+07	6.03094056E+04	9.15710210E-03	2.08458215E+00 8.30527434E-03
4.75000E+02	1.69681397E+02	-3.59846748E+07	6.66961442E+04	4.96319522E-03	2.23685650E+00 4.13723677E-03
5.00000E+02	2.26533267E+02	-3.42339343E+07	7.33947609E+04	2.02781565E-03	2.30169552E+00 1.22127982E-03
5.25000E+02	2.84209642E+02	-3.23141570E+07	8.01891808E+04	-4.49447601E-05	2.30555889E+00 -6.21091716E-04
5.50000E+02	3.41397306E+02	-3.02249244E+07	8.69267173E+04	-2.05471699E-03	2.25905045E+00 -3.27903695E-03
5.75000E+02	3.96557634E+02	-2.79698184E+07	9.34263613E+04	-4.40237151E-03	2.14619589E+00 -5.71823575E-03
5.77000E+02	4.00838402E+02	-2.77824611E+07	9.39304843E+04	-4.58221811E-03	2.13457226E+00 -5.90518268E-03
6.00000E+02	4.48161795E+02	-2.55571080E+07	9.95063245E+04	-6.56173712E-03	1.97475731E+00 -7.96323465E-03

6.25000E+02	4.94797508E+02	-2.29993804E+07	1.05001460E+05	-8.52058353E-03	1.74977421E+00	-9.99947733E-03
6.50000E+02	5.35198037E+02	-2.03131618E+07	1.09761977E+05	-1.02678570E-02	1.47663329E+00	-1.18138094E-02
6.75000E+02	5.68047907E+02	-1.55708572E+07	3.74787493E+05	-1.17631457E-02	1.13371243E+00	-1.70418428E-02
7.00000E+02	5.90341584E+02	-1.74931969E+06	7.00502437E+05	-1.25163312E-02	6.33218871E-01	-2.23825627E-02
7.25000E+02	5.98922957E+02	1.77718410E+07	8.25721114E+05	-1.18912980E-02	4.98885882E-02	-2.35211729E-02
7.50000E+02	5.93106711E+02	3.77692681E+07	7.40381727E+05	-9.63732610E-03	-5.04241176E-01	-2.00652378E-02
7.75000E+02	5.74996598E+02	5.32839832E+07	4.75700489E+05	-6.05412207E-03	-9.15704686E-01	-1.21528463E-02
8.00000E+02	5.49284181E+02	6.06284979E+07	1.00021009E+05	-1.99250004E-03	-1.11018304E+00	-3.14216681E-03
8.25000E+02	5.21559786E+02	5.80392271E+07	-3.05382814E+05	1.91529835E-03	-1.08103494E+00	5.42544563E-03
8.50000E+02	4.97063261E+02	4.57602255E+07	-6.63205473E+05	5.18724437E-03	-8.54994193E-01	1.24752166E-02
8.75000E+02	4.80079666E+02	2.58047289E+07	-9.11164425E+05	7.30123023E-03	-4.90732124E-01	1.65049113E-02
9.00000E+02	4.73143886E+02	1.43248377E+06	-1.01135762E+06	8.06163468E-03	-6.15789765E-02	1.75135751E-02
9.25000E+02	4.76981873E+02	-2.35509563E+07	-9.68700079E+05	7.52423292E-03	3.57722827E-01	1.53363303E-02
9.50000E+02	4.90441219E+02	-4.61637015E+07	-8.24612252E+05	5.92614329E-03	7.10356881E-01	1.25762421E-02
9.75000E+02	5.11655595E+02	-6.40863715E+07	-5.97495800E+05	3.39892212E-03	9.73156580E-01	8.21743664E-03
9.91000E+02	5.28094174E+02	-7.22623536E+07	-4.21526663E+05	1.40884991E-03	1.07787080E+00	4.80825848E-03
1.00000E+03	5.37948290E+02	-7.55844117E+07	-3.16164259E+05	1.97903211E-04	1.11193270E+00	2.74761498E-03
1.02500E+03	5.65916808E+02	-7.97430922E+07	-1.67791384E+04	-3.35557319E-03	1.10632636E+00	-3.22448618E-03
1.05000E+03	5.91895222E+02	-7.66008856E+07	2.61390816E+05	-6.80962087E-03	9.54424647E-01	-8.85173661E-03
1.07500E+03	6.12418457E+02	-6.71628965E+07	4.81094026E+05	-9.93488156E-03	6.72501873E-01	-1.35251355E-02
1.10000E+03	6.24560208E+02	-5.32950604E+07	6.11227027E+05	-1.24818054E-02	2.88472909E-01	-1.69433166E-02
1.12500E+03	6.26405034E+02	-3.75244125E+07	6.30646506E+05	-1.39992692E-02	-1.46731755E-01	-1.81632017E-02
1.13300E+03	6.24645680E+02	-3.25518859E+07	6.10219031E+05	-1.43366001E-02	-2.93106873E-01	-1.84047270E-02
1.16000E+03	6.09900942E+02	-1.79994177E+07	4.54314853E+05	-1.51212582E-02	-8.01645935E-01	-1.90718221E-02
1.19000E+03	5.77475213E+02	-7.02518091E+06	2.55357459E+05	-1.55288486E-02	-1.35223353E+00	-1.74736240E-02
1.20600E+03	5.53649347E+02	-3.82470509E+06	1.51477771E+05	-1.56234416E-02	-1.62519726E+00	-1.67054257E-02
1.21200E+03	5.43601178E+02	-3.17136378E+06	1.04110570E+05	-1.56860082E-02	-1.72419252E+00	-1.65647965E-02
1.22500E+03	5.19773083E+02	-1.96092844E+06	8.16668052E+04	-1.57856432E-02	-1.94166815E+00	-1.69226913E-02
1.24200E+03	4.84248597E+02	-8.50157939E+05	4.82168233E+04	-1.58554391E-02	-2.24113915E+00	-1.85341515E-02
1.25000E+03	4.65741448E+02	-5.33459218E+05	3.07763963E+04	-1.58719275E-02	-2.38564808E+00	-1.75817273E-02
1.26418E+03	4.30231398E+02	-3.30682093E+05	-2.70202518E+03	-1.58888261E-02	-2.62210733E+00	-1.57387136E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =					5.77705146E-01
1.26418E+03	4.30231398E+02	-3.30682093E+05	4.11354058E+04	-1.58888261E-02	-2.62210733E+00	-1.81741264E-02
1.27500E+03	4.00840679E+02	-3.37402148E+04	1.34322308E+04	-1.58940020E-02	-2.81055795E+00	-1.66402370E-02
1.28000E+03	3.86584527E+02	7.27119848E-13	2.29674749E-14	-1.58941737E-02	-2.89190306E+00	-1.58941737E-02

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
1.10098718E+02	1.21217277E+04	2.12435233E-01	4.52531918E+00	7.46094600E-01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-3.01230151E-02	-5.23068580E-01	-3.01230151E-02
1.16200E+03	-8.90587443E-01	-6.68926507E+04	-3.34639848E+04	-3.01230820E-02	-5.81976802E-01	-2.94538023E-02
1.16400E+03	-2.11344824E+00	-1.33858406E+05	-3.35023868E+04	-3.01232827E-02	-6.40883830E-01	-2.94532350E-02
1.16600E+03	-3.45412199E+00	-2.00904665E+05	-3.35444886E+04	-3.01236175E-02	-6.99789782E-01	-2.94527277E-02
1.16800E+03	-4.91260668E+00	-2.68038827E+05	-3.35902900E+04	-3.01240864E-02	-7.58694781E-01	-2.94522806E-02
1.17000E+03	-6.48890052E+00	-3.35268291E+05	-3.36397911E+04	-3.01246897E-02	-8.17598945E-01	-2.94518939E-02
1.18000E+03	-1.61374612E+01	-6.73104119E+05	-3.39427891E+04	-3.01297290E-02	-1.11211151E+00	-2.94508733E-02
1.19000E+03	-2.87311222E+01	-1.01443236E+06	-3.43382734E+04	-3.01381634E-02	-1.40662156E+00	-2.94513980E-02
1.20000E+03	-4.42699363E+01	-1.36017788E+06	-3.48262456E+04	-3.01500324E-02	-1.70114475E+00	-2.94535075E-02
1.20600E+03	-5.50069794E+01	-1.57013024E+06	-3.51634256E+04	-3.01588223E-02	-1.87787164E+00	-2.94555538E-02
1.21000E+03	-6.27601729E+01	-1.55966122E+06	2.49425329E+03	-3.01629952E-02	-1.99872466E+00	-3.02128802E-02
1.21200E+03	-6.68180477E+01	-1.55479951E+06	2.36682207E+03	-3.01650714E-02	-2.05914996E+00	-3.02124079E-02
1.22000E+03	-8.42580189E+01	-1.53801515E+06	1.81914698E+03	-3.01733170E-02	-2.30083926E+00	-3.02096999E-02
1.23000E+03	-1.08776818E+02	-1.52359450E+06	1.04917234E+03	-3.01835181E-02	-2.60291193E+00	-3.02045015E-02
1.24000E+03	-1.36316051E+02	-1.51734788E+06	1.84345697E+02	-3.01936498E-02	-2.90492274E+00	-3.01973367E-02
1.24200E+03	-1.42186289E+02	-1.47863890E-12	8.11073395E-10	-3.01951670E-02	-2.96531559E+00	-3.01951670E-02

\$AS001

80 SECOND BURN

N=5,WOSQ=0.,DWOS=10.,

H=0.,CODEI=1,CODEII=1,

P=0,ACC=0.,BEAM=2.,

OUTST=-57.,-37.,-25.,0.,

25.,50.,75.,100.,125.,150.,175.,

200.,225.,250.,275.,300.,325.,

350.,375.,385.,400.,425.,450.,

475.,500.,525.,550.,575.,577.,

600.,625.,650.,675.,700.,725.,

750.,775.,800.,825.,850.,875.,900.,

925.,950.,975.,991.,1000.,1025.,

1050.,1075.,1100.,1125.,1133.,1160.,1190.,

t=80
Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.05811406E+01	4.23583350E+02	4.93450544E+02	4.85426061E+02	4.35438295E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-2.12234561E-02	1.02194888E+01 -2.12234561E-02
-3.70000E+01	1.31812500E+02	7.46474926E+03	7.41210594E+02	-2.12068093E-02	9.79308565E+00 -2.14071365E-02
-2.50000E+01	2.47764457E+02	1.89475590E+04	1.17065923E+03	-2.11301490E-02	9.53224048E+00 -2.18187720E-02
0.	4.79235599E+02	5.90355463E+04	2.02794275E+03	-2.07230489E-02	8.98612332E+00 -2.16887359E-02
2.50000E+01	6.97131996E+02	1.19925564E+05	2.83494077E+03	-2.01866893E-02	8.44838756E+00 -2.09966723E-02
5.00000E+01	9.01814445E+02	2.00375153E+05	3.59299578E+03	-1.97673640E-02	7.92822322E+00 -2.05658075E-02
7.50000E+01	1.09364923E+03	2.99178883E+05	4.30347171E+03	-1.94018011E-02	7.42028749E+00 -2.01567962E-02
1.00000E+02	1.27289445E+03	4.15160074E+05	4.96730932E+03	-1.89336610E-02	6.92042867E+00 -1.98051188E-02
1.25000E+02	1.43977266E+03	5.47162470E+05	5.58533596E+03	-1.83022482E-02	6.43145961E+00 -1.92821317E-02
1.50000E+02	1.59461203E+03	6.94055100E+05	6.15876610E+03	-1.74872295E-02	5.95791781E+00 -1.85677148E-02
1.75000E+02	1.73794792E+03	8.54746124E+05	6.68960668E+03	-1.70269350E-02	5.51022237E+00 -1.76958957E-02
2.00000E+02	1.87023063E+03	1.02819418E+06	7.17950555E+03	-1.64671436E-02	5.07398648E+00 -1.71850942E-02
2.25000E+02	1.99177989E+03	1.21339001E+06	7.62964648E+03	-1.58005637E-02	4.65189088E+00 -1.65635283E-02
2.50000E+02	2.10299589E+03	1.40935724E+06	8.04151302E+03	-1.51257190E-02	4.24933644E+00 -1.55279902E-02
2.75000E+02	2.20446413E+03	1.61516525E+06	8.41727837E+03	-1.46289082E-02	3.87018540E+00 -1.48520837E-02
3.00000E+02	2.29663991E+03	1.82993453E+06	8.75863642E+03	-1.41825959E-02	3.50545974E+00 -1.43405752E-02
3.25000E+02	2.37984888E+03	2.05282039E+06	9.06678803E+03	-1.37672205E-02	3.15265270E+00 -1.38911389E-02
3.50000E+02	2.45437375E+03	2.28300595E+06	9.34277875E+03	-1.33721468E-02	2.81062956E+00 -1.34749355E-02
3.75000E+02	2.52044532E+03	3.73884567E+06	2.47937202E+04	-1.28368656E-02	2.47683201E+00 -1.30651293E-02
3.85000E+02	2.54456581E+03	3.98679622E+06	2.47963670E+04	-1.26120794E-02	2.34737318E+00 -1.28265809E-02
4.00000E+02	2.57835073E+03	4.35979896E+06	2.49353777E+04	-1.22925940E-02	2.15752188E+00 -1.24927174E-02
4.25000E+02	2.62843950E+03	4.98582528E+06	2.51414773E+04	-1.17458155E-02	1.85132619E+00 -1.20369733E-02
4.50000E+02	2.67103408E+03	5.61661575E+06	2.53167341E+04	-1.10972102E-02	1.55804934E+00 -1.14547911E-02
4.75000E+02	2.70649288E+03	6.25141699E+06	2.54626151E+04	-1.04236152E-02	1.28095804E+00 -1.07389417E-02
5.00000E+02	2.73523111E+03	6.88951624E+06	2.55808524E+04	-9.87668743E-03	1.02006669E+00 -1.01577957E-02
5.25000E+02	2.75761676E+03	7.53024188E+06	2.56729545E+04	-9.42947871E-03	7.72493200E-01 -9.61393495E-03
5.50000E+02	2.77395068E+03	8.17295666E+06	2.57401452E+04	-8.91946255E-03	5.34837455E-01 -9.28199981E-03
5.75000E+02	2.78449994E+03	8.81705040E+06	2.57835196E+04	-8.23438891E-03	3.11234354E-01 -8.59753707E-03
5.77000E+02	2.78510527E+03	8.86861995E+06	2.57860106E+04	-8.17733836E-03	2.94096239E-01 -8.54052161E-03
6.00000E+02	2.78967752E+03	9.46194843E+06	2.58047928E+04	-7.49733608E-03	1.05396370E-01 -7.86078386E-03

6.25000E+02	2.78994717E+03	1.01071216E+07	2.58058596E+04	-6.70826085E-03	-8.13689349E-02	-7.07172366E-03
6.50000E+02	2.78580040E+03	1.07520899E+07	2.57887495E+04	-5.86716073E-03	-2.47754127E-01	-6.23038255E-03
6.75000E+02	2.77776305E+03	1.13964256E+07	2.57556264E+04	-4.97406986E-03	-3.92452916E-01	-5.33682516E-03
7.00000E+02	2.76639359E+03	1.20397569E+07	2.57087883E+04	-4.02905463E-03	-5.14161063E-01	-4.39115024E-03
7.25000E+02	2.75228306E+03	1.26817710E+07	2.56506676E+04	-3.03220906E-03	-6.11577177E-01	-3.39348607E-03
7.50000E+02	2.73606013E+03	1.32469990E+07	1.84797670E+04	-1.98537533E-03	-6.82353184E-01	-2.24565374E-03
7.75000E+02	2.71843594E+03	1.35978982E+07	9.50504978E+03	-9.36408918E-04	-7.23466155E-01	-1.05826853E-03
8.00000E+02	2.70014302E+03	1.37194295E+07	1.90348077E+02	2.63441499E-05	-7.36263509E-01	2.41562410E-05
8.25000E+02	2.68186106E+03	1.36074612E+07	-9.12009884E+03	9.14840822E-04	-7.23196549E-01	1.01966954E-03
8.50000E+02	2.66420712E+03	1.32661106E+07	-1.81090832E+04	1.75065917E-03	-6.86010577E-01	1.94966008E-03
8.75000E+02	2.64776161E+03	1.27071519E+07	-2.64821743E+04	2.50509443E-03	-6.26851428E-01	2.77259114E-03
9.00000E+02	2.63303806E+03	1.19495218E+07	-3.37596026E+04	3.17373112E-03	-5.48360639E-01	3.48924143E-03
9.25000E+02	2.62048868E+03	1.10406392E+07	-3.87295474E+04	3.75031939E-03	-4.53422548E-01	4.06265445E-03
9.50000E+02	2.61048390E+03	1.00236089E+07	-4.24648936E+04	4.22940614E-03	-3.45377786E-01	4.57186496E-03
9.75000E+02	2.60333283E+03	8.92627368E+06	-4.51352295E+04	4.66033826E-03	-2.25302562E-01	5.02433204E-03
9.91000E+02	2.60038564E+03	8.19464691E+06	-4.62360559E+04	4.97941250E-03	-1.42815969E-01	5.28228392E-03
1.00000E+03	2.59931697E+03	7.77660537E+06	-4.66351196E+04	5.04009128E-03	-9.46667700E-02	5.41618095E-03
1.02500E+03	2.59868275E+03	6.60503689E+06	-4.68732380E+04	5.36654654E-03	4.49685731E-02	5.73274371E-03
1.05000E+03	2.60163008E+03	5.44408591E+06	-4.57748473E+04	5.63068137E-03	1.91609965E-01	5.98829737E-03
1.07500E+03	2.60831378E+03	4.32792227E+06	-4.32819283E+04	5.84160965E-03	3.43619106E-01	6.16460912E-03
1.10000E+03	2.61884720E+03	3.29196384E+06	-3.93525087E+04	6.00168257E-03	4.99419547E-01	6.28892716E-03
1.12500E+03	2.63329612E+03	2.37273949E+06	-3.38563150E+04	6.09584096E-03	6.56710764E-01	6.31938205E-03
1.13300E+03	2.63875219E+03	2.11064054E+06	-3.16410338E+04	6.11741507E-03	7.07304935E-01	6.32835529E-03
1.16000E+03	2.66016245E+03	1.37313426E+06	-2.34424216E+04	6.17166683E-03	8.78826330E-01	6.37551398E-03
1.19000E+03	2.68939779E+03	7.07702715E+05	-1.88234375E+04	6.20657546E-03	1.06999015E+00	6.34993277E-03
1.20600E+03	2.70732931E+03	4.30238216E+05	-1.60804322E+04	6.21669097E-03	1.17143092E+00	6.33155120E-03
1.21200E+03	2.71447103E+03	3.79816911E+05	-8.28537458E+03	6.22394309E-03	1.20914418E+00	6.29387922E-03
1.22500E+03	2.73072366E+03	2.75546669E+05	-7.75034579E+03	6.23676529E-03	1.29125924E+00	6.34467347E-03
1.24200E+03	2.75360309E+03	1.50105444E+05	-6.99723165E+03	6.24764823E-03	1.40102715E+00	6.63638332E-03
1.25000E+03	2.76502339E+03	9.56221645E+04	-6.62126096E+03	6.25062052E-03	1.45404795E+00	6.61846835E-03
1.26418E+03	2.78630550E+03	6.64862771E+03	-5.92061627E+03	6.25278569E-03	1.54764459E+00	6.58170881E-03
1.26418000E+03	TOTAL DEFLECTION OF THE SPRING MASS SYSTEM =			1.91908257E+00		
1.26418E+03	2.78630550E+03	6.64862771E+03	-8.31915967E+02	6.25278569E-03	1.54764459E+00	6.29900324E-03
1.27500E+03	2.80341882E+03	6.73442602E+02	-2.68518304E+02	6.25288947E-03	1.61563242E+00	6.26780716E-03
1.28000E+03	2.81157524E+03	-2.93086794E-09	4.32681051E-10	6.25289290E-03	1.64693430E+00	6.25289290E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.05811406E+01	4.23583350E+02	8.07512953E+00	1.60996123E+01	1.58312315E+01	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	8.04088347E-03	8.55043567E-01	8.04088347E-03
1.16200E+03	1.72175784E+00	6.79550422E+03	3.40006269E+03	8.04089026E-03	8.70989429E-01	7.97288901E-03
1.16400E+03	3.47968246E+00	1.35975529E+04	3.40199177E+03	8.04091065E-03	8.86935186E-01	7.97287082E-03
1.16600E+03	5.26949857E+00	2.04034947E+04	3.40395586E+03	8.04094466E-03	9.02880921E-01	7.97286554E-03
1.16800E+03	7.09120615E+00	2.72133996E+04	3.40595494E+03	8.04099227E-03	9.18826657E-01	7.97287317E-03
1.17000E+03	8.94480522E+00	3.40273377E+04	3.40798901E+03	8.04105351E-03	9.34772422E-01	7.97289373E-03
1.18000E+03	1.86911777E+01	6.81599755E+04	3.41868435E+03	8.04156436E-03	1.01450257E+00	7.97319067E-03
1.19000E+03	2.92348720E+01	1.02403941E+05	3.43025465E+03	8.04241708E-03	1.09423732E+00	7.97381199E-03
1.20000E+03	4.05759503E+01	1.36767985E+05	3.44269996E+03	8.04361284E-03	1.17397990E+00	7.97475884E-03
1.20600E+03	4.77633796E+01	1.57447689E+05	3.45058721E+03	8.04449546E-03	1.22183057E+00	7.97548372E-03
1.21000E+03	5.27157001E+01	1.41422822E+05	-4.00336186E+03	8.04489395E-03	1.25432986E+00	8.12496119E-03
1.21200E+03	5.52406098E+01	1.33418863E+05	-4.00059111E+03	8.04507718E-03	1.27057991E+00	8.12508900E-03
1.22000E+03	6.56652567E+01	1.01459513E+05	-3.98915145E+03	8.04570348E-03	1.33558233E+00	8.12548651E-03
1.23000E+03	7.94273595E+01	6.16427655E+04	-3.97404939E+03	8.04624707E-03	1.41683864E+00	8.12572806E-03
1.24000E+03	9.40020329E+01	2.19814973E+04	-3.95805563E+03	8.04652573E-03	1.49809595E+00	8.12568684E-03
1.24200E+03	9.70144761E+01	-3.57517752E-08	-9.53671551E-10	8.04654505E-03	1.51434610E+00	8.04654505E-03

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Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
4.55826183E+01	2.07777509E+03	4.93450544E+02	5.00940429E+02	1.11744787E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	2.64940090E-02	-6.65858576E+00	2.64940090E-02
-3.70000E+01	-8.33118849E+01	-2.35477826E+04	-2.32231738E+03	2.64413200E-02	-6.12260643E+00	2.70689733E-02
-2.50000E+01	-1.54760662E+02	-5.92778066E+04	-3.62044485E+03	2.62006310E-02	-5.78552312E+00	2.83303045E-02
0.	-2.90504655E+02	-1.81288218E+05	-6.08656775E+03	2.49396608E-02	-5.07639477E+00	2.78380264E-02
2.50000E+01	-4.08793469E+02	-3.60960962E+05	-8.23542548E+03	2.33088112E-02	-4.39545788E+00	2.56617899E-02
5.00000E+01	-5.10773856E+02	-5.90596432E+05	-1.00879555E+04	2.20596099E-02	-3.76915534E+00	2.43013778E-02
7.50000E+01	-5.97579032E+02	-8.63062373E+05	-1.16648631E+04	2.09931868E-02	-3.18050373E+00	2.30396540E-02
1.00000E+02	-6.70009429E+02	-1.17166173E+06	-1.29804500E+04	1.96581585E-02	-2.61737556E+00	2.19354304E-02
1.25000E+02	-7.28760875E+02	-1.51001142E+06	-1.40474180E+04	1.78968241E-02	-2.08765103E+00	2.03612834E-02
1.50000E+02	-7.74819305E+02	-1.87210827E+06	-1.48836707E+04	1.56740370E-02	-1.60349676E+00	1.82852073E-02
1.75000E+02	-8.09673547E+02	-2.25250432E+06	-1.55165931E+04	1.44472584E-02	-1.18846919E+00	1.59989177E-02
2.00000E+02	-8.34544717E+02	-2.64642520E+06	-1.59680926E+04	1.29898034E-02	-8.05625279E-01	1.45866126E-02
2.25000E+02	-8.50315843E+02	-3.04952989E+06	-1.62542100E+04	1.12949332E-02	-4.61255673E-01	1.29203542E-02
2.50000E+02	-8.58049895E+02	-3.45791568E+06	-1.63942949E+04	9.61771741E-03	-1.66774800E-01	1.04378308E-02
2.75000E+02	-8.59162414E+02	-3.86824741E+06	-1.64141196E+04	8.41305661E-03	7.29163510E-02	8.84826001E-03
3.00000E+02	-8.54720928E+02	-4.27778282E+06	-1.63331419E+04	7.35681030E-03	2.78699297E-01	7.65141079E-03
3.25000E+02	-8.45486859E+02	-4.68417981E+06	-1.61651371E+04	6.39733503E-03	4.56821406E-01	6.61826874E-03
3.50000E+02	-8.32110128E+02	-5.08541302E+06	-1.59218956E+04	5.50655154E-03	6.10409191E-01	5.68172329E-03
3.75000E+02	-8.15249557E+02	-6.79790474E+06	8.19860147E+02	4.44201035E-03	7.34688792E-01	4.43446230E-03
3.85000E+02	-8.07690022E+02	-6.78968598E+06	8.23930618E+02	4.04655615E-03	7.77041461E-01	4.03942872E-03
4.00000E+02	-7.95607477E+02	-6.77551819E+06	1.06796555E+03	3.52651045E-03	8.33595484E-01	3.51793930E-03
4.25000E+02	-7.73761333E+02	-6.74338664E+06	1.50909450E+03	2.73425329E-03	9.11349148E-01	2.71677681E-03
4.50000E+02	-7.50223026E+02	-6.69977878E+06	1.98438430E+03	1.91203040E-03	9.68960464E-01	1.88400238E-03
4.75000E+02	-7.25506145E+02	-6.64396902E+06	2.48350451E+03	1.15210193E-03	1.00598829E+00	1.12134646E-03
5.00000E+02	-7.00074361E+02	-6.57548473E+06	2.99697675E+03	6.00199667E-04	1.02671657E+00	5.67265856E-04
5.25000E+02	-6.74278637E+02	-6.49405981E+06	3.51775646E+03	1.93711327E-04	1.03554572E+00	1.68436787E-04
5.50000E+02	-6.48378904E+02	-6.39957904E+06	4.04066169E+03	-2.22140284E-04	1.03487501E+00	-2.79051012E-04
5.75000E+02	-6.22655401E+02	-6.29205602E+06	4.56004554E+03	-7.33987036E-04	1.02139095E+00	-7.98213029E-04
5.77000E+02	-6.20614257E+02	-6.28289472E+06	4.60124762E+03	-7.74551437E-04	1.01975337E+00	-8.39357742E-04
6.00000E+02	-5.97429029E+02	-6.17166064E+06	5.06936893E+03	-1.23664184E-03	9.95042147E-01	-1.30804140E-03

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6.25000E+02	-5.73020644E+02	-6.03872504E+06	5.56220103E+03	-1.72907891E-03	9.56075970E-01	-1.80741977E-03
6.50000E+02	-5.49741144E+02	-5.89374055E+06	6.03224280E+03	-2.21030570E-03	9.04767267E-01	-2.29526687E-03
6.75000E+02	-5.27895366E+02	-5.73735415E+06	6.47334064E+03	-2.67937558E-03	8.41417350E-01	-2.77054939E-03
7.00000E+02	-5.07780297E+02	-5.57036473E+06	6.87949940E+03	-3.13540023E-03	7.66352631E-01	-3.23229459E-03
7.25000E+02	-4.89684470E+02	-5.39371893E+06	7.24489464E+03	-3.57756178E-03	6.79922956E-01	-3.67960255E-03
7.50000E+02	-4.73928392E+02	-4.84305711E+06	4.07641933E+04	-3.99657784E-03	5.77398825E-01	-4.57072141E-03
7.75000E+02	-4.61015645E+02	-3.40462825E+06	7.30173731E+04	-4.32514530E-03	4.53401646E-01	-5.26126547E-03
8.00000E+02	-4.51385421E+02	-1.26060731E+06	9.70696825E+04	-4.49383182E-03	3.15848223E-01	-5.60957529E-03
8.25000E+02	-4.45269852E+02	1.37563724E+06	1.12341937E+05	-4.49216334E-03	1.72864679E-01	-5.78344997E-03
8.50000E+02	-4.42737034E+02	4.28172316E+06	1.18662087E+05	-4.31777137E-03	3.02667012E-02	-5.62175034E-03
8.75000E+02	-4.43683536E+02	7.23610907E+06	1.16291146E+05	-3.98481266E-03	-1.04289382E-01	-5.15947070E-03
9.00000E+02	-4.47834597E+02	1.00301410E+07	1.06348166E+05	-3.51763262E-03	-2.25177930E-01	-4.51154071E-03
9.25000E+02	-4.54796187E+02	1.25281281E+07	9.28744834E+04	-2.95375832E-03	-3.28337115E-01	-3.70274609E-03
9.50000E+02	-4.64076337E+02	1.46454112E+07	7.58721125E+04	-2.33456694E-03	-4.11716631E-01	-2.94643882E-03
9.75000E+02	-4.75190607E+02	1.62936981E+07	5.55102496E+04	-1.62947618E-03	-4.74715956E-01	-2.07713948E-03
9.91000E+02	-4.83019070E+02	1.70682437E+07	4.11691278E+04	-1.14365555E-03	-5.03177372E-01	-1.47566465E-03
1.00000E+03	-4.87600372E+02	1.74011606E+07	3.27802729E+04	-8.61530253E-04	-5.14889605E-01	-1.12588729E-03
1.02500E+03	-5.00709279E+02	1.79220008E+07	8.76698846E+03	-5.75990134E-05	-5.30612330E-01	-1.26091111E-04
1.05000E+03	-5.13899370E+02	1.78382672E+07	-1.53966131E+04	7.28826354E-04	-5.21560152E-01	8.49112393E-04
1.07500E+03	-5.26564001E+02	1.71602393E+07	-3.85942233E+04	1.48670670E-03	-4.88615270E-01	1.77472329E-03
1.10000E+03	-5.38122327E+02	1.59254431E+07	-5.97683607E+04	2.18452250E-03	-4.33436420E-01	2.62078791E-03
1.12500E+03	-5.48079666E+02	1.41956399E+07	-7.83010675E+04	2.68710316E-03	-3.60997478E-01	3.20409700E-03
1.13300E+03	-5.50862268E+02	1.35467763E+07	-8.38448993E+04	2.82068842E-03	-3.34652968E-01	3.37965441E-03
1.16000E+03	-5.58573705E+02	1.10496465E+07	-9.87378502E+04	3.20835650E-03	-2.34047470E-01	4.06694651E-03
1.19000E+03	-5.63698018E+02	7.83111987E+06	-1.09865757E+05	3.53131104E-03	-1.06504350E-01	4.36803700E-03
1.20600E+03	-5.64838196E+02	6.06427483E+06	-1.10766267E+05	3.65562408E-03	-3.59360253E-02	4.44681170E-03
1.21200E+03	-5.64972489E+02	5.43770960E+06	-1.04436252E+05	3.75862712E-03	-8.82810440E-03	4.64016450E-03
1.22500E+03	-5.64666684E+02	4.08020178E+06	-1.04388594E+05	3.94517439E-03	5.58749729E-02	5.39857824E-03
1.24200E+03	-5.62766835E+02	2.30768706E+06	-1.04089189E+05	4.10930056E-03	1.76611493E-01	9.89203329E-03
1.25000E+03	-5.61036844E+02	1.47602266E+06	-1.03809847E+05	4.15515681E-03	2.55886297E-01	9.92237055E-03
1.26418E+03	-5.56410565E+02	8.91529425E+03	-1.03062756E+05	4.18707234E-03	3.96613199E-01	9.91278099E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			7.83924673E+00		
1.26418E+03	-5.56410565E+02	8.91529425E+03	-1.09867630E+03	4.18707234E-03	3.96613199E-01	4.24810991E-03
1.27500E+03	-5.51871706E+02	9.21196515E+02	-3.65654387E+02	4.18721247E-03	4.42362431E-01	4.20752661E-03
1.28000E+03	-5.49607426E+02	-5.15019546E-10	-3.90207008E-12	4.18721717E-03	4.63349689E-01	4.18721717E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.55826183E+01	2.07777509E+03	8.07512953E+00	5.85244617E-01	4.32112636E-01	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	6.07195765E-03	-2.69803885E-01	6.07195765E-03
1.16200E+03	-5.26252900E-01	6.89839606E+03	3.44568326E+03	6.07196456E-03	-2.57797933E-01	6.00305089E-03
1.16400E+03	-1.02984261E+00	1.37870303E+04	3.44297252E+03	6.07198524E-03	-2.45791758E-01	6.00312579E-03
1.16600E+03	-1.50941982E+00	2.06703723E+04	3.44039104E+03	6.07201970E-03	-2.33785422E-01	6.00321188E-03
1.16800E+03	-1.96498417E+00	2.75486806E+04	3.43793881E+03	6.07206792E-03	-2.21778903E-01	6.00330915E-03
1.17000E+03	-2.39653528E+00	3.44222137E+04	3.43561584E+03	6.07212989E-03	-2.09772178E-01	6.00341758E-03
1.18000E+03	-4.19407548E+00	6.87272997E+04	3.42593997E+03	6.07264572E-03	-1.49734688E-01	6.00412692E-03
1.19000E+03	-5.39120066E+00	1.02951786E+05	3.41949604E+03	6.07350417E-03	-8.96887131E-02	6.00511425E-03
1.20000E+03	-5.98781209E+00	1.37127995E+05	3.41628458E+03	6.07470460E-03	-2.96314783E-02	6.00637890E-03
1.20600E+03	-6.05748089E+00	1.57623996E+05	3.41590956E+03	6.07558885E-03	6.40942058E-03	6.00727066E-03
1.21000E+03	-5.98276806E+00	1.45891382E+05	-2.93290521E+03	6.07599354E-03	3.09472481E-02	6.13465164E-03
1.21200E+03	-5.90860413E+00	1.40025948E+05	-2.93250600E+03	6.07618415E-03	4.32167357E-02	6.13483427E-03
1.22000E+03	-5.36654839E+00	1.16576162E+05	-2.92958820E+03	6.07686841E-03	9.22980251E-02	6.13546018E-03
1.23000E+03	-4.13678489E+00	8.73106262E+04	-2.92296858E+03	6.07754800E-03	1.53655580E-01	6.13600737E-03
1.24000E+03	-2.29342284E+00	5.81278005E+04	-2.91304607E+03	6.07803274E-03	2.15017303E-01	6.13629366E-03
1.24200E+03	-1.85111564E+00	3.43329458E-10	-3.15069245E-08	6.07808891E-03	2.27289039E-01	6.07808891E-03

TRW SYSTEMS

t=80

Mode 3

Atlas SLV3A/Barnes 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
5.47165668E+01	2.99390268E+03	4.93450544E+02	4.56087372E+02	3.94070635E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-8.40040370E-02	1.82132288E+01	-8.40040370E-02
-3.70000E+01	2.25518328E+02	9.24005853E+04	9.09135001E+03	-8.37970502E-02	1.65092175E+01	-8.62541719E-02
-2.50000E+01	4.17132006E+02	2.31935968E+05	1.41078912E+04	-8.28541343E-02	1.54263955E+01	-9.11528938E-02
0.	7.74161795E+02	7.04581510E+05	2.34542081E+04	-7.79379099E-02	1.31457868E+01	-8.91065805E-02
2.50000E+01	1.07528469E+03	1.39243559E+06	3.13361521E+04	-7.16227643E-02	1.09782584E+01	-8.05759506E-02
5.00000E+01	1.32501267E+03	2.26021066E+06	3.78724410E+04	-6.68225753E-02	9.02399034E+00	-7.52386733E-02
7.50000E+01	1.52776016E+03	3.27581550E+06	4.31793066E+04	-6.27574251E-02	7.21608609E+00	-7.03327421E-02
1.00000E+02	1.68664522E+03	4.40959857E+06	4.73370086E+04	-5.77126267E-02	5.50819241E+00	-6.60173651E-02
1.25000E+02	1.80438334E+03	5.63367628E+06	5.04169948E+04	-5.11136490E-02	3.92975731E+00	-5.99587358E-02
1.50000E+02	1.88476664E+03	6.92228522E+06	5.25185037E+04	-4.28589049E-02	2.52549566E+00	-5.20726775E-02
1.75000E+02	1.93336147E+03	8.25269781E+06	5.37890760E+04	-3.83441156E-02	1.37576660E+00	-4.37230232E-02
2.00000E+02	1.95468632E+03	9.60578339E+06	5.43454937E+04	-3.30297803E-02	3.46606205E-01	-3.84643297E-02
2.25000E+02	1.95202784E+03	1.09647338E+07	5.42737929E+04	-2.69075123E-02	-5.40190377E-01	-3.23348916E-02
2.50000E+02	1.92928353E+03	1.23150764E+07	5.36762400E+04	-2.09035822E-02	-1.24679314E+00	-2.35886994E-02
2.75000E+02	1.89145836E+03	1.36452826E+07	5.26841337E+04	-1.66332115E-02	-1.76222802E+00	-1.80300769E-02
3.00000E+02	1.84228034E+03	1.49468167E+07	5.13953344E+04	-1.29246838E-02	-2.15908610E+00	-1.38517002E-02
3.25000E+02	1.78440688E+03	1.62131570E+07	4.98791225E+04	-9.58779850E-03	-2.45967988E+00	-1.02695112E-02
3.50000E+02	1.72009158E+03	1.74393703E+07	4.81944075E+04	-6.51871514E-03	-2.67554577E+00	-7.04894715E-03
3.75000E+02	1.65168342E+03	1.90174325E+07	-5.67002363E+04	-3.41101566E-03	-2.78584384E+00	-2.88900416E-03
3.85000E+02	1.62370499E+03	1.84503218E+07	-5.67219420E+04	-2.32041904E-03	-2.80937012E+00	-1.82974480E-03
4.00000E+02	1.58143085E+03	1.75902762E+07	-5.79520509E+04	-9.37675795E-04	-2.82622803E+00	-4.72571053E-04
4.25000E+02	1.51088025E+03	1.61157940E+07	-6.00046051E+04	1.03954267E-03	-2.81064722E+00	1.73444255E-03
4.50000E+02	1.44137461E+03	1.45903003E+07	-6.20267350E+04	2.91727894E-03	-2.74274199E+00	3.79336276E-03
4.75000E+02	1.37418526E+03	1.30150222E+07	-6.39815548E+04	4.49421395E-03	-2.62780956E+00	5.28655518E-03
5.00000E+02	1.31026289E+03	1.13920196E+07	-6.58410856E+04	5.51671168E-03	-2.48289869E+00	6.24024009E-03
5.25000E+02	1.25021199E+03	9.72390930E+06	-6.75878881E+04	6.17607302E-03	-2.31929028E+00	6.66168163E-03
5.50000E+02	1.19441954E+03	8.01365180E+06	-6.92108608E+04	6.74067295E-03	-2.13931155E+00	7.71547381E-03
5.75000E+02	1.14342168E+03	6.26453194E+06	-7.06944076E+04	7.31665544E-03	-1.93866557E+00	8.31235132E-03
5.77000E+02	1.13956102E+03	6.12303067E+06	-7.08066986E+04	7.35661544E-03	-1.92199917E+00	8.35389288E-03
6.00000E+02	1.09760857E+03	4.48018962E+06	-7.20270661E+04	7.75013425E-03	-1.72489932E+00	8.76459997E-03

6.25000E+02	1.05726474E+03	2.66450532E+06	-7.32006194E+04	8.03842397E-03	-1.50166427E+00	9.06941861E-03
6.50000E+02	1.02257951E+03	8.21531505E+05	-7.42095299E+04	8.17915948E-03	-1.27267745E+00	9.22436413E-03
6.75000E+02	9.93649593E+02	-1.04457487E+06	-7.50509842E+04	8.17030717E-03	-1.34171239E+00	9.22736328E-03
7.00000E+02	9.70476741E+02	-2.92962095E+06	-7.57249303E+04	8.01017056E-03	-8.12589762E-01	9.07671888E-03
7.25000E+02	9.52966719E+02	-4.82944746E+06	-7.62341086E+04	7.69739044E-03	-5.89167931E-01	8.77111028E-03
7.50000E+02	9.40978127E+02	-7.14879795E+06	-1.12195087E+05	7.22118801E-03	-3.69629671E-01	8.80140049E-03
7.75000E+02	9.34456526E+02	-1.02872292E+07	-1.35643316E+05	6.54739397E-03	-1.54201115E-01	8.28641084E-03
8.00000E+02	9.33112011E+02	-1.37755486E+07	-1.40454383E+05	5.70274094E-03	4.32736950E-02	7.31715914E-03
8.25000E+02	9.36357051E+02	-1.71721063E+07	-1.28728585E+05	4.69635682E-03	2.12763299E-01	6.17599572E-03
8.50000E+02	9.43432838E+02	-2.00969097E+07	-1.03224990E+05	3.53611188E-03	3.48306293E-01	4.67045242E-03
8.75000E+02	9.53404467E+02	-2.22463450E+07	-6.73047794E+04	2.30488183E-03	4.43586312E-01	2.98472809E-03
9.00000E+02	9.65240202E+02	-2.34079501E+07	-2.60844449E+04	1.06489475E-03	4.96828548E-01	1.30867460E-03
9.25000E+02	9.77901866E+02	-2.36131826E+07	9.31473526E+03	-1.15384116E-04	5.10186874E-01	-1.90502948E-04
9.50000E+02	9.90440004E+02	-2.29634799E+07	4.24255591E+04	-1.17708220E-03	4.88729933E-01	-1.51922381E-03
9.75000E+02	1.00203306E+03	-2.15127262E+07	7.30417841E+04	-2.19080629E-03	4.34794220E-01	-2.77985293E-03
9.91000E+02	1.00859205E+03	-2.02026426E+07	9.03634510E+04	-2.79824665E-03	3.84265813E-01	-3.52698416E-03
1.00000E+03	1.01189955E+03	-1.93494932E+07	9.90927255E+04	-3.12196207E-03	3.50734173E-01	-3.92109696E-03
1.02500E+03	1.01932417E+03	-1.66118385E+07	1.18703553E+05	-3.94006020E-03	2.40138662E-01	-4.86743170E-03
1.05000E+03	1.02371292E+03	-1.34811789E+07	1.30303614E+05	-4.60105580E-03	1.08630164E-01	-5.61905278E-03
1.07500E+03	1.02461060E+03	-1.01736241E+07	1.32686447E+05	-5.11248252E-03	-3.82707537E-02	-6.10267988E-03
1.10000E+03	1.02170668E+03	-6.93053913E+06	1.25039097E+05	-5.47205957E-03	-1.94851041E-01	-6.38475371E-03
1.12500E+03	1.01485956E+03	-4.00944373E+06	1.06592938E+05	-5.65386443E-03	-3.53182714E-01	-6.35765934E-03
1.13300E+03	1.01183086E+03	-3.19069076E+06	9.79009380E+04	-5.68849308E-03	-4.03990128E-01	-6.34116600E-03
1.16000E+03	9.98615898E+02	-1.04139631E+06	6.23638012E+04	-5.75276328E-03	-5.74767042E-01	-6.29505720E-03
1.19000E+03	9.78439095E+02	1.56653728E+06	7.03767034E+04	-5.74085494E-03	-7.68698784E-01	-6.27683646E-03
1.20600E+03	9.65346498E+02	2.57092705E+06	5.62393373E+04	-5.70353513E-03	-8.67692963E-01	-6.10524468E-03
1.21200E+03	9.60043507E+02	2.33774747E+06	-3.94840239E+04	-5.65956580E-03	-8.99970871E-01	-5.32628456E-03
1.22500E+03	9.47906423E+02	1.80631213E+06	-4.23092668E+04	-5.57822258E-03	-9.67272861E-01	-4.98915007E-03
1.24200E+03	9.30818421E+02	1.05362892E+06	-4.62902248E+04	-5.50444096E-03	-1.03900225E+00	-2.93276181E-03
1.25000E+03	9.22414647E+02	6.75513162E+05	-4.82458325E+04	-5.48345115E-03	-1.06194130E+00	-2.80312712E-03
1.26418E+03	9.07084802E+02	-3.37589997E+04	-5.18135793E+04	-5.46946081E-03	-1.10015739E+00	-2.59092862E-03
1.26418000E+03	TOTAL DEFECTION OF THE SPRING MASS SYSTEM = 2.98942128E+00					
1.26418E+03	9.07084802E+02	-3.37589997E+04	4.21364842E+03	-5.46946081E-03	-1.10015739E+00	-5.70355238E-03
1.27500E+03	8.94851802E+02	-3.43043514E+03	1.36683394E+03	-5.46998839E-03	-1.16102562E+00	-5.54592361E-03
1.28000E+03	8.88977822E+02	-3.17401184E-06	3.37151713E-08	-5.47000585E-03	-1.18856621E+00	-5.47000585E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.47165668E+01	2.99390268E+03	8.07512953E+00	4.54383019E+01	4.19414446E+01	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-2.89681083E-02	-2.06022455E-01	-2.89681083E-02
1.16200E+03	-4.67144113E-01	-9.03524411E+04	-4.51804279E+04	-2.89681986E-02	-2.62151683E-01	-2.80645900E-02		
1.16400E+03	-1.04757676E+00	-1.80717654E+05	-4.51849299E+04	-2.89684697E-02	-3.18281017E-01	-2.80647711E-02		
1.16600E+03	-1.74026856E+00	-2.71092741E+05	-4.51903025E+04	-2.89689215E-02	-3.74410876E-01	-2.80651154E-02		
1.16800E+03	-2.54522087E+00	-3.61479444E+05	-4.51965459E+04	-2.89695540E-02	-4.30541588E-01	-2.80656231E-02		
1.17000E+03	-3.46243575E+00	-4.51879505E+05	-4.52036601E+04	-2.89703674E-02	-4.86673478E-01	-2.80662942E-02		
1.18000E+03	-9.73256531E+00	-9.04141126E+05	-4.52522926E+04	-2.89771471E-02	-7.67362049E-01	-2.80721012E-02		
1.19000E+03	-1.88099393E+01	-1.35699794E+06	-4.53226987E+04	-2.89884522E-02	-1.04812914E+00	-2.80819982E-02		
1.20000E+03	-3.06955475E+01	-1.81066770E+06	-4.54148862E+04	-2.90042898E-02	-1.32901567E+00	-2.80959920E-02		
1.20600E+03	-3.91754299E+01	-2.08335041E+06	-4.54806580E+04	-2.90159716E-02	-1.49762198E+00	-2.81063585E-02		
1.21000E+03	-4.54057601E+01	-1.89089180E+06	4.80890918E+04	-2.90212706E-02	-1.61754581E+00	-2.99830524E-02		
1.21200E+03	-4.87008192E+01	-1.79473902E+06	4.80635346E+04	-2.90237276E-02	-1.67751388E+00	-2.99849983E-02		
1.22000E+03	-6.30805242E+01	-1.41066695E+06	4.79520023E+04	-2.90322750E-02	-1.91742070E+00	-2.99913150E-02		
1.23000E+03	-8.37543892E+01	-9.31929295E+05	4.77916512E+04	-2.90400828E-02	-2.21735990E+00	-2.99959158E-02		
1.24000E+03	-1.07427815E+02	-4.54911476E+05	4.76080348E+04	-2.90447045E-02	-2.51732685E+00	-2.99968652E-02		
1.24200E+03	-1.12522462E+02	-2.70275960E-06	9.54811819E-07	-2.90451275E-02	-2.57730604E+00	-2.90451275E-02		

t 80,3

t=80

Mode 4

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
6.60796113E+01	4.36651502E+03	4.93450544E+02	2.05314262E+02	1.99021227E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	5.47079996E-02	-1.02156836E+01	5.47079996E-02
-3.70000E+01	-1.24925457E+02	-7.51933907E+04	-7.37759069E+03	5.45393284E-02	-9.10205173E+00	5.65332718E-02
-2.50000E+01	-2.29848298E+02	-1.88091914E+05	-1.13841278E+04	5.37735052E-02	-8.38508835E+00	6.04700509E-02
0.	-4.20476150E+02	-5.66689736E+05	-1.86623087E+04	4.98039967E-02	-6.87350028E+00	5.86908104E-02
2.50000E+01	-5.74253029E+02	-1.10946507E+06	-2.45325120E+04	4.47480042E-02	-5.45638287E+00	5.17572934E-02
5.00000E+01	-6.94862736E+02	-1.78280166E+06	-2.91361249E+04	4.09420776E-02	-4.21168133E+00	4.74167720E-02
7.50000E+01	-7.85864638E+02	-2.55685965E+06	-3.26098504E+04	3.77516118E-02	-3.08465952E+00	4.34726382E-02
1.00000E+02	-8.49771143E+02	-3.40466298E+06	-3.50479817E+04	3.38362384E-02	-2.03874927E+00	3.99850071E-02
1.25000E+02	-8.88773114E+02	-4.30132010E+06	-3.65346264E+04	2.87705845E-02	-1.09639717E+00	3.51801681E-02
1.50000E+02	-9.05875480E+02	-5.22441135E+06	-3.71844938E+04	2.25054330E-02	-2.90970209E-01	2.90290284E-02
1.75000E+02	-9.05336321E+02	-6.15496741E+06	-3.71622108E+04	1.91186845E-02	3.23541005E-01	2.28349055E-02
2.00000E+02	-8.90564995E+02	-7.07798687E+06	-3.65962556E+04	1.51796021E-02	8.45716300E-01	1.88392277E-02
2.25000E+02	-8.64057636E+02	-7.98103953E+06	-3.55819364E+04	1.06964898E-02	1.26059269E+00	1.42546834E-02
2.50000E+02	-8.28717987E+02	-8.85426034E+06	-3.42304254E+04	6.35114929E-03	1.54374190E+00	8.06350296E-03
2.75000E+02	-7.88106118E+02	-9.69091087E+06	-3.26779253E+04	3.29913217E-03	1.69328412E+00	4.16555357E-03
3.00000E+02	-7.44831273E+02	-1.04873198E+07	-3.10242627E+04	6.80962121E-04	1.75965362E+00	1.24054600E-03
3.25000E+02	-7.00752981E+02	-1.12418733E+07	-2.93401507E+04	-1.64667156E-03	1.75889934E+00	-1.24567103E-03
3.50000E+02	-6.57435502E+02	-1.19545725E+07	-2.76852253E+04	-3.76265530E-03	1.69963164E+00	-3.45806409E-03
3.75000E+02	-6.16488998E+02	-7.78592473E+06	6.89506667E+04	-5.16538860E-03	1.57074578E+00	-5.80018386E-03
3.85000E+02	-6.01080779E+02	-7.09633033E+06	6.89680996E+04	-5.59868837E-03	1.51072351E+00	-6.19529823E-03
4.00000E+02	-5.79142507E+02	-6.05475024E+06	6.98990075E+04	-6.10418485E-03	1.41405476E+00	-6.66517207E-03
4.25000E+02	-5.45970950E+02	-4.28929147E+06	7.13063949E+04	-6.71275090E-03	1.23716807E+00	-7.53853428E-03
4.50000E+02	-5.17448493E+02	-2.49107613E+06	7.25164900E+04	-7.12698915E-03	1.04228955E+00	-8.15123336E-03
4.75000E+02	-4.93955086E+02	-6.65251951E+05	7.35131616E+04	-7.31264901E-03	8.37088404E-01	-8.22302872E-03
5.00000E+02	-4.75587818E+02	1.18276748E+06	7.42922826E+04	-7.29534190E-03	6.32763753E-01	-8.11174061E-03
5.25000E+02	-4.62276798E+02	3.04757351E+06	7.48568809E+04	-7.16693867E-03	4.33039765E-01	-7.70477387E-03
5.50000E+02	-4.53894742E+02	4.92387715E+06	7.52123170E+04	-6.90062265E-03	2.35257057E-01	-7.95995106E-03
5.75000E+02	-4.50449624E+02	6.80643608E+06	7.53582007E+04	-6.42765064E-03	4.18224276E-02	-7.48903375E-03
5.77000E+02	-4.50380913E+02	6.95715561E+06	7.53611148E+04	-6.38325196E-03	2.68885527E-02	-7.44467611E-03
6.00000E+02	-4.51676431E+02	8.69013415E+06	7.53058695E+04	-5.80278011E-03	-1.37905406E-01	-6.86342616E-03

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6.25000E+02	-4.57181419E+02	1.05702147E+07	7.50719093E+04	-5.02611379E-03	-3.00062469E-01	-6.08346463E-03
6.50000E+02	-4.66478542E+02	1.24423871E+07	7.46769976E+04	-4.09811991E-03	-4.40798566E-01	-5.14990861E-03
6.75000E+02	-4.78984402E+02	1.43029284E+07	7.41458833E+04	-3.01959048E-03	-5.56287348E-01	-4.06389870E-03
7.00000E+02	-4.94020340E+02	1.61487850E+07	7.35073564E+04	-1.79159148E-03	-6.42735230E-01	-2.82690636E-03
7.25000E+02	-5.10813348E+02	1.79776732E+07	7.27942095E+04	-4.15404739E-04	-6.96388946E-01	-1.44067530E-03
7.50000E+02	-5.28404567E+02	1.89395583E+07	-6.90776183E+03	1.08792559E-03	-7.01694449E-01	1.18521801E-03
7.75000E+02	-5.45262840E+02	1.76422427E+07	-9.54821846E+04	2.53157691E-03	-6.38283923E-01	3.75570749E-03
8.00000E+02	-5.59793603E+02	1.42678222E+07	-1.71822120E+05	3.66742017E-03	-5.17754949E-01	5.64238706E-03
8.25000E+02	-5.70790882E+02	9.20605333E+06	-2.29614770E+05	4.43738301E-03	-3.57578129E-01	7.07663324E-03
8.50000E+02	-5.77441418E+02	2.97841394E+06	-2.64545407E+05	4.82135078E-03	-1.72216761E-01	7.72844316E-03
8.75000E+02	-5.79347623E+02	-3.81239404E+06	-2.74549271E+05	4.80140938E-03	1.89144860E-02	7.57463434E-03
9.00000E+02	-5.76577386E+02	-1.05451225E+07	-2.60783990E+05	4.41441834E-03	1.99575504E-01	6.85165189E-03
9.25000E+02	-5.69553181E+02	-1.67353387E+07	-2.32246833E+05	3.73381478E-03	3.56886102E-01	5.60677312E-03
9.50000E+02	-5.59012234E+02	-2.20591706E+07	-1.91643757E+05	2.84827339E-03	4.82600754E-01	4.39378755E-03
9.75000E+02	-5.45744943E+02	-2.62297917E+07	-1.40539314E+05	1.74595387E-03	5.74057768E-01	2.87933544E-03
9.91000E+02	-5.36250642E+02	-2.81889422E+07	-1.03970640E+05	9.52991143E-04	6.11524868E-01	1.79146405E-03
1.00000E+03	-5.30687287E+02	-2.90286579E+07	-8.25564924E+04	4.84584531E-04	6.24776158E-01	1.15036270E-03
1.02500E+03	-5.14920834E+02	-3.03346804E+07	-2.18316438E+04	-8.68402828E-04	6.30605513E-01	-6.97843110E-04
1.05000E+03	-4.99585178E+02	-3.01340382E+07	3.72426961E+04	-2.19987306E-03	5.90666097E-01	-2.49083162E-03
1.07500E+03	-4.85793398E+02	-2.85222947E+07	9.03604467E+04	-3.47140146E-03	5.07333001E-01	-4.14573315E-03
1.10000E+03	-4.74583016E+02	-2.56988838E+07	1.33551157E+05	-4.61587709E-03	3.85047978E-01	-5.59070305E-03
1.12500E+03	-4.66791656E+02	-2.19538377E+07	1.63982212E+05	-5.41149594E-03	2.34812394E-01	-6.49421163E-03
1.13300E+03	-4.65125251E+02	-2.06128744E+07	1.70962826E+05	-5.61646583E-03	1.81788783E-01	-6.75621800E-03
1.16000E+03	-4.62818205E+02	-1.57921482E+07	1.81207008E+05	-6.18950389E-03	-1.45953807E-02	-7.76521701E-03
1.19000E+03	-4.67460352E+02	-4.99877214E+06	3.53279089E+05	-6.54399114E-03	-2.94341330E-01	-9.23452724E-03
1.20600E+03	-4.73341862E+02	5.78402248E+05	3.44137168E+05	-6.58340007E-03	-4.40627803E-01	-9.04152270E-03
1.21200E+03	-4.76103275E+02	5.45649774E+05	-5.93397781E+03	-6.57332554E-03	-4.79843054E-01	-6.52323735E-03
1.22500E+03	-4.82889336E+02	4.53939370E+05	-8.23734153E+03	-6.55363559E-03	-5.64166249E-01	-6.43894697E-03
1.24200E+03	-4.93390527E+02	2.84467521E+05	-1.18029390E+04	-6.53440083E-03	-6.70174484E-01	-5.87868199E-03
1.25000E+03	-4.98938288E+02	1.82596637E+05	-1.36858625E+04	-6.52870931E-03	-7.16765788E-01	-5.76838361E-03
1.26418E+03	-5.09672278E+02	-3.68461303E+04	-1.73295971E+04	-6.52538833E-03	-7.97116904E-01	-5.56263294E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 8.00953057E-01					
1.26418E+03	-5.09672278E+02	-3.68461303E+04	4.56396136E+03	-6.52538833E-03	-7.97116904E-01	-6.77894174E-03
1.27500E+03	-5.18689014E+02	-3.78177462E+03	1.50342292E+03	-6.52596617E-03	-8.69562614E-01	-6.60948967E-03
1.28000E+03	-5.23118927E+02	1.21510352E-05	3.20749538E-08	-6.52598543E-03	-9.02402615E-01	-6.52598543E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.60796113E+01	4.36651502E+03	8.07512953E+00	2.96211411E+02	2.57444730E+02	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-9.64095222E-02	1.51024676E+00	-9.64095222E-02
1.16200E+03	2.82704763E+00	-3.46167248E+05	-1.73043180E+05			-9.64098684E-02	1.32435083E+00	-9.29490048E-02
1.16400E+03	5.28985026E+00	-6.92225046E+05	-1.73015320E+05			-9.64109068E-02	1.13845133E+00	-9.29506004E-02
1.16600E+03	7.38085024E+00	-1.03823133E+06	-1.72991666E+05			-9.64126372E-02	9.52548027E-01	-9.29528039E-02
1.16800E+03	9.10003878E+00	-1.38419451E+06	-1.72972218E+05			-9.64150597E-02	7.66639709E-01	-9.29556153E-02
1.17000E+03	1.04474046E+01	-1.73012301E+06	-1.72956977E+05			-9.64181740E-02	5.80725161E-01	-9.29590345E-02
1.18000E+03	1.16063295E+01	-3.45953958E+06	-1.72943866E+05			-9.64441224E-02	-3.48983578E-01	-9.29852451E-02
1.19000E+03	3.46660248E+00	-5.18935096E+06	-1.73035945E+05			-9.64873661E-02	-1.27903038E+00	-9.30266472E-02
1.20000E+03	-1.39759168E+01	-6.92060926E+06	-1.73233258E+05			-9.65479143E-02	-2.20956719E+00	-9.30832491E-02
1.20600E+03	-2.89090600E+01	-7.96049663E+06	-1.73402185E+05			-9.65925571E-02	-2.76818773E+00	-9.31245134E-02
1.21000E+03	-4.07823429E+01	-7.26721626E+06	1.73248492E+05			-9.66128606E-02	-3.16846479E+00	-1.00077830E-01
1.21200E+03	-4.73194340E+01	-6.92079247E+06	1.73174543E+05			-9.66223192E-02	-3.36862853E+00	-1.00085810E-01
1.22000E+03	-7.74715147E+01	-5.53671216E+06	1.72833456E+05			-9.66555380E-02	-4.16942648E+00	-1.00112207E-01
1.23000E+03	-1.24171792E+02	-3.81092463E+06	1.72305172E+05			-9.66866939E-02	-5.17066298E+00	-1.00132797E-01
1.24000E+03	-1.80885233E+02	-2.09098628E+06	1.71663618E+05			-9.67063633E-02	-6.17203659E+00	-1.00139636E-01
1.24200E+03	-1.93429585E+02	2.11670079E-06	5.04442436E-06			-9.67083391E-02	-6.37226402E+00	-9.67083391E-02

t80,y

t=80

Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
8.29429571E+01	6.87953413E+03	4.93450544E+02	3.71419644E+02	3.43541901E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	4.78797183E-02	-7.48236681E+00	4.78797183E-02
-3.70000E+01	-8.98742494E+01	-8.61276798E+04	-8.41624900E+03	4.76861402E-02	-6.50247265E+00	4.99608021E-02
-2.50000E+01	-1.64044814E+02	-2.14362637E+05	-1.28789512E+04	4.68114338E-02	-5.85928814E+00	5.43872875E-02
0.	-2.93439590E+02	-6.37902403E+05	-2.06625422E+04	4.23167793E-02	-4.50252557E+00	5.21560852E-02
2.50000E+01	-3.90052930E+02	-1.23102520E+06	-2.64723673E+04	3.66651323E-02	-3.25812262E+00	4.42286658E-02
5.00000E+01	-4.58124357E+02	-1.94728223E+06	-3.05648528E+04	3.24743023E-02	-2.20924654E+00	3.92664919E-02
7.50000E+01	-5.01672631E+02	-2.74699202E+06	-3.31832188E+04	2.90167146E-02	-1.29260518E+00	3.48383320E-02
1.00000E+02	-5.23527792E+02	-3.59555065E+06	-3.44947421E+04	2.48475799E-02	-4.68104634E-01	3.08992890E-02
1.25000E+02	-5.26158183E+02	-4.46206834E+06	-3.46488093E+04	1.95469312E-02	2.41223426E-01	2.56256697E-02
1.50000E+02	-5.12857910E+02	-5.31998204E+06	-3.38435874E+04	1.31091572E-02	8.02287985E-01	1.90466287E-02
1.75000E+02	-4.88050322E+02	-6.14854011E+06	-3.23485600E+04	9.69405089E-03	1.17121153E+00	1.29289069E-02
2.00000E+02	-4.55196767E+02	-6.93336731E+06	-3.03691353E+04	5.79816942E-03	1.44432037E+00	8.83508295E-03
2.25000E+02	-4.16852968E+02	-7.66423603E+06	-2.80590787E+04	1.45077774E-03	1.60892548E+00	4.25668561E-03
2.50000E+02	-3.75902170E+02	-8.33500083E+06	-2.55924181E+04	-2.68385140E-03	1.64658896E+00	-1.40360816E-03
2.75000E+02	-3.35626740E+02	-8.94423500E+06	-2.31669718E+04	-5.52945487E-03	1.56469117E+00	-4.91520657E-03
3.00000E+02	-2.98369041E+02	-9.49487713E+06	-2.09237670E+04	-7.92317550E-03	1.40778614E+00	-7.54577402E-03
3.25000E+02	-2.65800217E+02	-9.99278121E+06	-1.89629466E+04	-1.00114534E-02	1.19087839E+00	-9.75228116E-03
3.50000E+02	-2.39308834E+02	-1.04460757E+07	-1.73679123E+04	-1.18763356E-02	9.22433802E-01	-1.16852549E-02
3.75000E+02	-2.20132443E+02	3.50668493E+06	6.41953248E+04	-1.15750602E-02	6.12349821E-01	-1.21660753E-02
3.85000E+02	-2.14611459E+02	4.14868915E+06	6.42051619E+04	-1.13524150E-02	4.91964624E-01	-1.19078229E-02
4.00000E+02	-2.08551790E+02	5.11502161E+06	6.46098115E+04	-1.09985260E-02	3.16275231E-01	-1.15170639E-02
4.25000E+02	-2.04186468E+02	6.73488755E+06	6.49011001E+04	-1.03062371E-02	3.49905891E-02	-1.10578422E-02
4.50000E+02	-2.06663744E+02	8.35626211E+06	6.47349349E+04	-9.38264329E-03	-2.30948075E-01	-1.02969785E-02
4.75000E+02	-2.15516753E+02	9.96807180E+06	6.41423042E+04	-8.34439972E-03	-4.73522338E-01	-9.13873166E-03
5.00000E+02	-2.30091650E+02	1.15601946E+07	6.31675291E+04	-7.44941673E-03	-6.89074528E-01	-8.14356540E-03
5.25000E+02	-2.49758902E+02	1.31236147E+07	6.18525663E+04	-6.68444959E-03	-8.81208306E-01	-7.12885079E-03
5.50000E+02	-2.73981669E+02	1.46502951E+07	6.02328936E+04	-5.78027723E-03	-1.05610897E+00	-6.62862784E-03
5.75000E+02	-3.02310240E+02	1.61329594E+07	5.83384417E+04	-4.53869859E-03	-1.20622788E+00	-5.36036678E-03
5.77000E+02	-3.04733310E+02	1.62494746E+07	5.81764938E+04	-4.43423895E-03	-1.21684200E+00	-5.25362619E-03
6.00000E+02	-3.33984249E+02	1.75653532E+07	5.62204982E+04	-3.17953971E-03	-1.32312109E+00	-3.97137771E-03

TRIM SYSTEMS

6.25000E+02	-3.68129719E+02	1.89426038E+07	5.39370658E+04	-1.70706092E-03	-1.40383289E+00	-2.46673790E-03
6.50000E+02	-4.03809704E+02	2.02613496E+07	5.15509769E+04	-1.25855341E-04	-1.44553979E+00	-8.51925439E-04
6.75000E+02	-4.40015321E+02	2.15198578E+07	4.91296651E+04	1.55927769E-03	-1.44555892E+00	8.67310579E-04
7.00000E+02	-4.75672431E+02	2.27181364E+07	4.67449255E+04	3.34346857E-03	-1.40135308E+00	2.68508934E-03
7.25000E+02	-5.09645308E+02	2.38580402E+07	4.44726694E+04	5.22192211E-03	-1.31053219E+00	4.59554649E-03
7.50000E+02	-5.40472165E+02	2.25741902E+07	-1.73395968E+05	7.13474131E-03	-1.13778188E+00	9.57693804E-03
7.75000E+02	-5.65388095E+02	1.55328666E+07	-3.79693044E+05	8.66264969E-03	-8.62703910E-01	1.35305092E-02
8.00000E+02	-5.81901669E+02	4.17139404E+06	-5.16400495E+05	9.38133641E-03	-4.72440291E-01	1.53169743E-02
8.25000E+02	-5.88820345E+02	-9.62348782E+06	-5.73644623E+05	9.21206434E-03	-7.95919146E-02	1.58056807E-02
8.50000E+02	-5.86043910E+02	-2.38383353E+07	-5.50591233E+05	8.17227915E-03	2.96576919E-01	1.42227323E-02
8.75000E+02	-5.74550364E+02	-3.65482490E+07	-4.55386570E+05	6.41543469E-03	6.11420425E-01	1.10152990E-02
9.00000E+02	-5.56250717E+02	-4.61441290E+07	-3.09303405E+05	4.16489562E-03	8.36880850E-01	7.05558164E-03
9.25000E+02	-5.33347153E+02	-5.20696345E+07	-1.63532189E+05	1.69646664E-03	9.62927979E-01	3.01527461E-03
9.50000E+02	-5.08954548E+02	-5.43010595E+07	-1.42183421E+04	-7.35202076E-04	9.93150477E-01	-6.20538027E-04
9.75000E+02	-4.84749734E+02	-5.28001202E+07	1.32746158E+05	-3.18324997E-03	9.31923029E-01	-4.25378350E-03
9.91000E+02	-4.70506401E+02	-4.99732684E+07	2.19223880E+05	-4.68148650E-03	8.46098361E-01	-6.44942102E-03
1.00000E+03	-4.63176403E+02	-4.77975735E+07	2.63688791E+05	-5.48197485E-03	7.82790183E-01	-7.60849736E-03
1.02500E+03	-4.46329586E+02	-3.98550101E+07	3.65983454E+05	-7.48122229E-03	5.56005357E-01	-1.03404680E-02
1.05000E+03	-4.35919405E+02	-2.98246739E+07	4.29230138E+05	-9.01507102E-03	2.70522124E-01	-1.23684315E-02
1.07500E+03	-4.33163843E+02	-1.87820703E+07	4.46006916E+05	-1.00676128E-02	-5.30239890E-02	-1.33960226E-02
1.10000E+03	-4.38729878E+02	-7.94587282E+06	4.12304614E+05	-1.06286213E-02	-3.92770079E-01	-1.36381440E-02
1.12500E+03	-4.52673103E+02	1.40463369E+06	3.25956090E+05	-1.07354615E-02	-7.21300625E-01	-1.28876326E-02
1.13300E+03	-4.58851659E+02	3.85285604E+06	2.85202680E+05	-1.07099841E-02	-8.23338454E-01	-1.26113353E-02
1.16000E+03	-4.85545853E+02	9.25026792E+06	1.20071768E+05	-1.04933751E-02	-1.15022614E+00	-1.13274774E-02
1.19000E+03	-5.24159706E+02	3.97015680E+06	-2.48170060E+05	-1.02536825E-02	-1.41846303E+00	-8.36364557E-03
1.20600E+03	-5.47903235E+02	-5.10796972E+05	-3.07176892E+05	-1.02212559E-02	-1.54914878E+00	-8.02713525E-03
1.21200E+03	-5.57386488E+02	-3.25327249E+05	2.83595952E+04	-1.02286982E-02	-1.61193548E+00	-1.04680791E-02
1.22500E+03	-5.79226376E+02	-3.15303978E+04	1.66822686E+04	-1.02351948E-02	-1.74804724E+00	-1.04674622E-02
1.24200E+03	-6.10451509E+02	1.12434387E+05	-1.38049521E+01	-1.02318979E-02	-1.92514467E+00	-1.02311300E-02
1.25000E+03	-6.26172599E+02	7.89237009E+04	-8.42087699E+03	-1.02294426E-02	-2.00512778E+00	-9.75161212E-03
1.26418E+03	-6.55545630E+02	-1.50695327E+05	-2.41325484E+04	-1.02301907E-02	-2.13741824E+00	-8.88949355E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 9.97164949E-01					
1.26418E+03	-6.55545630E+02	-1.50695327E+05	1.88112413E+04	-1.02301907E-02	-2.13741824E+00	-1.12752596E-02
1.27500E+03	-6.79312113E+02	-1.53082779E+04	6.10013736E+03	-1.02325456E-02	-2.25564714E+00	-1.05714422E-02
1.28000E+03	-6.90720383E+02	4.38201303E-07	3.26968637E-09	-1.02326235E-02	-2.30766062E+00	-1.02526235E-02

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
8.29429571E+01	6.87953413E+03	8.07512953E+00	1.30106030E+02	1.02118627E+02	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			8.18574566E-02	-2.88346295E+00	8.18574566E-02
1.16200E+03	-5.59592547E+00	3.56419546E+05	1.78085739E+05			8.18578132E-02	-2.72687619E+00	7.82960985E-02
1.16400E+03	-1.08930836E+01	7.12495685E+05	1.77991330E+05			8.18588822E-02	-2.57028114E+00	7.82990556E-02
1.16600E+03	-1.58770454E+01	1.06838859E+06	1.77902503E+05			8.18606631E-02	-2.41367957E+00	7.83026130E-02
1.16800E+03	-2.05477964E+01	1.42410942E+06	1.77819258E+05			8.18631556E-02	-2.25707028E+00	7.83067705E-02
1.17000E+03	-2.49053201E+01	1.77966934E+06	1.77741595E+05			8.18663594E-02	-2.10045209E+00	7.83115275E-02
1.18000E+03	-4.19937790E+01	3.55544615E+06	1.77437034E+05			8.18930375E-02	-1.31718544E+00	7.83442969E-02
1.19000E+03	-5.12476828E+01	5.32887545E+06	1.77272105E+05			8.19374605E-02	-5.33516310E-01	7.83920184E-02
1.20000E+03	-5.26622595E+01	7.10135397E+06	1.77246893E+05			8.19996119E-02	2.50704711E-01	7.84546740E-02
1.20600E+03	-4.97455842E+01	8.16496610E+06	1.77298876E+05			8.20454107E-02	7.21564345E-01	7.84994332E-02
1.21000E+03	-4.61769334E+01	7.51570834E+06	-1.62279407E+05			8.20663182E-02	1.06277354E+00	8.53119063E-02
1.21200E+03	-4.38807560E+01	7.19118943E+06	-1.62238483E+05			8.20761228E-02	1.23340643E+00	8.53208924E-02
1.22000E+03	-3.12828864E+01	5.89411478E+06	-1.62013956E+05			8.21110161E-02	1.91610109E+00	8.53512952E-02
1.23000E+03	-7.85382595E+00	4.27593628E+06	-1.61596388E+05			8.21449140E-02	2.76975330E+00	8.53768417E-02
1.24000E+03	2.41128028E+01	2.66269422E+06	-1.61026659E+05			8.21680396E-02	3.62359187E+00	8.53885728E-02
1.24200E+03	3.15307638E+01	-5.42876172E-08	1.18152990E-07			8.21705941E-02	3.79432127E+00	8.21705941E-02

\$AS001

100 SECOND BURN

N=5, WDSQ=0., DWOS=10.,

H=0., CODEI=1, CODEII=1,

P=0, ACC=0., BEAM=2.,

OUTST=-57., -37., -25., 0.,

25., 50., 75., 100., 125., 150., 175.,

200., 225., 250., 275., 300., 325.,

350., 375., 385., 400., 425., 450.,

475., 500., 525., 550., 575., 577.,

600., 625., 650., 675., 700., 725.,

750., 775., 800., 825., 850., 875., 900.,

925., 950., 975., 991., 1000., 1025.,

1050., 1075., 1100., 1125., 1133., 1160., 1190.,

t=100

Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA

OMEGA SQUARED

TOTAL MASS

GENERALIZED MASS

INTG. PHI SQ DM

ACCELERATION

2.17580370E+01

4.73412173E+02

4.12414275E+02

4.02878808E+02

3.54545355E+02

0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.			-1.95631775E-02	8.93346849E+00	-1.95631775E-02
-3.70000E+01	1.15021558E+02	7.28740293E+03	7.23315483E+02	-1.95469230E-02	8.54031692E+00	-1.97424137E-02		
-2.50000E+01	2.16060739E+02	1.84885793E+04	1.14155437E+03	-1.94721044E-02	8.29954670E+00	-2.01436070E-02		
0.	4.17238614E+02	5.75454983E+04	1.97429283E+03	-1.90750893E-02	7.79534460E+00	-2.00152287E-02		
2.50000E+01	6.05888222E+02	1.16770884E+05	2.75516232E+03	-1.85525508E-02	7.29935517E+00	-1.93397400E-02		
5.00000E+01	7.82361935E+02	1.94884048E+05	3.48562823E+03	-1.81444828E-02	6.82050584E+00	-1.89190669E-02		
7.50000E+01	9.47016954E+02	2.90644679E+05	4.16717718E+03	-1.77891351E-02	6.35357928E+00	-1.85202188E-02		
1.00000E+02	1.10010505E+03	4.02843801E+05	4.80083477E+03	-1.73346296E-02	5.89454057E+00	-1.81768813E-02		
1.25000E+02	1.24184344E+03	5.30294714E+05	5.38750355E+03	-1.67223309E-02	5.44611935E+00	-1.76675069E-02		
1.50000E+02	1.37255171E+03	6.71838275E+05	5.92850542E+03	-1.59329368E-02	5.01270827E+00	-1.69730255E-02		
1.75000E+02	1.49274899E+03	8.26357837E+05	6.42601541E+03	-1.54876621E-02	4.60430719E+00	-1.61302636E-02		
2.00000E+02	1.60287137E+03	9.92791397E+05	6.88181701E+03	-1.49468138E-02	4.20702648E+00	-1.56349955E-02		
2.25000E+02	1.70322882E+03	1.17011172E+06	7.29719294E+03	-1.43036077E-02	3.82344428E+00	-1.50333270E-02		
2.50000E+02	1.79420852E+03	1.35732720E+06	7.67374742E+03	-1.36532252E-02	3.45872580E+00	-1.40370992E-02		
2.75000E+02	1.87637399E+03	1.55349553E+06	8.01381812E+03	-1.31750621E-02	3.11649382E+00	-1.33875402E-02		
3.00000E+02	1.95016270E+03	1.75772934E+06	8.31922404E+03	-1.27460709E-02	2.78812423E+00	-1.28961246E-02		
3.25000E+02	2.01588753E+03	1.96917865E+06	8.59125450E+03	-1.23473496E-02	2.47119987E+00	-1.24647689E-02		
3.50000E+02	2.07381978E+03	2.18702331E+06	8.83103106E+03	-1.19686273E-02	2.16461958E+00	-1.20657858E-02		
3.75000E+02	2.12418551E+03	3.57875683E+06	2.21178649E+04	-1.14533704E-02	1.86632003E+00	-1.16569988E-02		
3.85000E+02	2.14227102E+03	3.79994669E+06	2.21200829E+04	-1.12386750E-02	1.75088524E+00	-1.14300252E-02		
4.00000E+02	2.16726486E+03	4.13262450E+06	2.22350153E+04	-1.09350089E-02	1.58185234E+00	-1.11134601E-02		
4.25000E+02	2.20339034E+03	4.69064162E+06	2.24011411E+04	-1.04187448E-02	1.30984326E+00	-1.06781674E-02		
4.50000E+02	2.23286801E+03	5.25242668E+06	2.25366887E+04	-9.81048137E-03	1.05008315E+00	-1.01287962E-02		
4.75000E+02	2.25603610E+03	5.81723394E+06	2.26432058E+04	-9.18210694E-03	8.05505785E-01	-9.46251815E-03		
5.00000E+02	2.27328181E+03	6.38436020E+06	2.27224976E+04	-8.67421229E-03	5.75972701E-01	-8.92391006E-03		
5.25000E+02	2.28494622E+03	6.95314503E+06	2.27761264E+04	-8.26052527E-03	3.58754222E-01	-8.42416825E-03		
5.50000E+02	2.29130718E+03	7.52296349E+06	2.28053557E+04	-7.79046772E-03	1.50730830E-01	-8.11166992E-03		
5.75000E+02	2.29261323E+03	8.09321871E+06	2.28113243E+04	-7.16078396E-03	-4.42873900E-02	-7.48207022E-03		
5.77000E+02	2.29250975E+03	8.13884090E+06	2.28108483E+04	-7.10842247E-03	-5.91992116E-02	-7.42970203E-03		
6.00000E+02	2.28924450E+03	8.66335053E+06	2.27957968E+04	-6.48511323E-03	-2.22986920E-01	-6.80618079E-03		

6.25000E+02	2.28162643E+03	9.23284556E+06	2.27607159E+04	-5.76348652E-03	-3.84211156E-01	-6.08405999E-03
6.50000E+02	2.27020884E+03	9.80124064E+06	2.27081574E+04	-4.99597421E-03	-5.26805476E-01	-5.31580742E-03
6.75000E+02	2.25547187E+03	1.03681261E+07	2.26403296E+04	-4.18268189E-03	-6.49618224E-01	-4.50155978E-03
7.00000E+02	2.23792442E+03	1.09331493E+07	2.25595730E+04	-3.32374592E-03	-7.51501575E-01	-3.64148639E-03
7.25000E+02	2.21810402E+03	1.14960176E+07	2.24683598E+04	-2.41932870E-03	-8.31312299E-01	-2.73578447E-03
7.50000E+02	2.19657671E+03	1.20565018E+07	2.23692935E+04	-1.46961369E-03	-8.87912390E-01	-1.78467416E-03
7.75000E+02	2.17393344E+03	1.26144396E+07	2.22651100E+04	-5.07152349E-04	-9.20085448E-01	-7.92602477E-04
8.00000E+02	2.15078768E+03	1.31665294E+07	2.203251328E+04	4.00080482E-04	-9.28327882E-01	1.66458266E-04
8.25000E+02	2.12775052E+03	1.35102777E+07	7.21466383E+03	1.26798468E-03	-9.11474688E-01	1.18505751E-03
8.50000E+02	2.10544805E+03	1.35307658E+07	-5.47595849E+03	2.10941997E-03	-8.69437415E-01	2.16959534E-03
8.75000E+02	2.08449410E+03	1.32428900E+07	-1.733986056E+04	2.88736944E-03	-8.03847272E-01	3.06311293E-03
9.00000E+02	2.06544444E+03	1.26701752E+07	-2.79184953E+04	3.59029675E-03	-7.17170091E-01	3.85121727E-03
9.25000E+02	2.04879488E+03	1.18764861E+07	-3.52859829E+04	4.20599642E-03	-6.12356912E-01	4.49056079E-03
9.50000E+02	2.03495701E+03	1.09195740E+07	-4.10594300E+04	4.72463556E-03	-4.92916333E-01	5.05575999E-03
9.75000E+02	2.02427526E+03	9.83448909E+06	-4.55164782E+04	5.19674100E-03	-3.60045652E-01	5.56380937E-03
9.91000E+02	2.01924314E+03	9.08861322E+06	-4.76163860E+04	5.47206754E-03	-2.68651134E-01	5.85607066E-03
1.00000E+03	2.01706557E+03	8.65582737E+06	-4.85248521E+04	5.61726047E-03	-2.15253639E-01	6.00858993E-03
1.02500E+03	2.01360757E+03	7.42128926E+06	-4.99687288E+04	5.98231128E-03	-6.01929802E-02	6.37269197E-03
1.05000E+03	2.01413080E+03	6.17123375E+06	-4.97521882E+04	6.28037320E-03	1.02970897E-01	6.66906217E-03
1.07500E+03	2.01881517E+03	4.94815286E+06	-4.77998804E+04	6.52045771E-03	2.72410986E-01	6.87717324E-03
1.10000E+03	2.02779417E+03	3.79616951E+06	-4.40565381E+04	6.70421261E-03	4.46347962E-01	7.02579318E-03
1.12500E+03	2.04114716E+03	2.76080985E+06	-3.83775521E+04	6.81323687E-03	6.22156582E-01	7.06663007E-03
1.13300E+03	2.04635075E+03	2.46309771E+06	-3.60162498E+04	6.83837554E-03	6.78740786E-01	7.07848387E-03
1.16000E+03	2.06726485E+03	1.61725344E+06	-2.70792644E+04	6.90195976E-03	8.70681471E-01	7.13743163E-03
1.19000E+03	2.09660002E+03	8.40161734E+05	-2.21279433E+04	6.94322419E-03	1.08476975E+00	7.11174826E-03
1.20600E+03	2.11486539E+03	5.13059348E+05	-1.90065246E+04	6.95525668E-03	1.19837974E+00	7.09101757E-03
1.21200E+03	2.12218233E+03	4.53173830E+05	-9.84553525E+03	6.96390710E-03	1.24060206E+00	7.04701242E-03
1.22500E+03	2.13890792E+03	3.29134105E+05	-9.23017058E+03	6.97921397E-03	1.33256535E+00	7.10772576E-03
1.24200E+03	2.16260201E+03	1.79521510E+05	-8.35851023E+03	6.99222118E-03	1.45567811E+00	7.45658286E-03
1.25000E+03	2.17448573E+03	1.14390737E+05	-7.92126058E+03	6.99577650E-03	1.51524952E+00	7.43584653E-03
1.26418E+03	2.19671756E+03	7.80215784E+03	-7.10324713E+03	6.99836441E-03	1.62039498E+00	7.39298925E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			2.06766970E+00		
1.26418E+03	2.19671756E+03	7.80215784E+03	-9.75583482E+02	6.99836441E-03	1.62039498E+00	7.05256349E-03
1.27500E+03	2.21466201E+03	7.91005754E+02	-3.15328041E+02	6.99848624E-03	1.69650766E+00	7.01600447E-03
1.28000E+03	2.22323214E+03	-1.31052641E-07	9.48871968E-09	6.99849027E-03	1.73154405E+00	6.99849027E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
2.17580370E+01	4.73412173E+02	8.07512953E+00	1.76105965E+01	1.72660144E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	9.11089010E-03	8.42211609E-01	9.11089010E-03
1.16200E+03	1.69827341E+00	8.03012156E+03	4.01760635E+03	9.11089813E-03	8.60272792E-01	9.03054600E-03
1.16400E+03	3.43688007E+00	1.60674592E+04	4.01973867E+03	9.11092222E-03	8.78333863E-01	9.03052745E-03
1.16600E+03	5.21160885E+00	2.41091058E+04	4.02191530E+03	9.11096240E-03	8.96394912E-01	9.03052409E-03
1.16800E+03	7.02245973E+00	3.21551499E+04	4.02413623E+03	9.11101866E-03	9.14455969E-01	9.03053594E-03
1.17000E+03	8.86943275E+00	4.02056802E+04	4.02640146E+03	9.11109102E-03	9.32517066E-01	9.03056299E-03
1.18000E+03	1.86461361E+01	8.05287254E+04	4.03839216E+03	9.11169459E-03	1.02282420E+00	9.03092675E-03
1.19000E+03	2.93259352E+01	1.20977216E+05	4.05149047E+03	9.11270201E-03	1.11313687E+00	9.03167220E-03
1.20000E+03	4.09089048E+01	1.61562227E+05	4.06569648E+03	9.11411459E-03	1.20345892E+00	9.03280066E-03
1.20600E+03	4.82922538E+01	1.85983373E+05	4.07475183E+03	9.11515720E-03	1.25765824E+00	9.03366217E-03
1.21000E+03	5.33965612E+01	1.67189921E+05	-4.69507307E+03	9.11562809E-03	1.29449569E+00	9.20952956E-03
1.21200E+03	5.60039718E+01	1.57802965E+05	-4.69187519E+03	9.11584476E-03	1.31291491E+00	9.20968226E-03
1.22000E+03	6.68020065E+01	1.20320455E+05	-4.67863187E+03	9.11658637E-03	1.38659442E+00	9.21015901E-03
1.23000E+03	8.11284650E+01	7.36210491E+04	-4.66106110E+03	9.11723274E-03	1.47869776E+00	9.21045397E-03
1.24000E+03	9.63759660E+01	2.71029987E+04	-4.64236070E+03	9.11756839E-03	1.57080238E+00	9.21041560E-03
1.24200E+03	9.95359916E+01	-8.40629312E-07	-1.59554228E-08	9.11759237E-03	1.58922178E+00	9.11759237E-03

t/00,1

t=100

Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA OMEGA SQUARED TOTAL MASS GENERALIZED MASS INTG. PHI SQ DM ACCELERATION

4.68502176E+01 2.19494289E+03 4.12414275E+02 4.19301383E+02 7.60324105E+01 0.

STATION IN INTG. PHI DX M/Q LB IN/IN V/Q LB/IN B.SLOPE 1/IN Y/Q EQ. PHI PHI PRIME 1/IN

-5.70000E+01	0.	0.	0.	-2.46860946E-02	6.04019575E+00	-2.46860946E-02
-3.70000E+01	7.54416516E+01	2.25485287E+04	2.22289132E+03	-2.46356317E-02	5.54063362E+00	-2.52364132E-02
-2.50000E+01	1.40041898E+02	5.67349767E+04	3.46278224E+03	-2.44052196E-02	5.22607414E+00	-2.64421503E-02
0.	2.62392076E+02	1.73319590E+05	5.81092101E+03	-2.31990533E-02	4.56425230E+00	-2.59661585E-02
2.50000E+01	3.68459632E+02	3.44674272E+05	7.84641377E+03	-2.16408218E-02	3.92952393E+00	-2.38826543E-02
5.00000E+01	4.59343136E+02	5.63217868E+05	9.59044978E+03	-2.04487403E-02	3.34706646E+00	-2.25799513E-02
7.50000E+01	5.36126446E+02	8.21942794E+05	1.10639495E+04	-1.94324093E-02	2.80060888E+00	-2.13734530E-02
1.00000E+02	5.99575194E+02	1.11428111E+06	1.22813638E+04	-1.81619146E-02	2.27859087E+00	-2.03165398E-02
1.25000E+02	6.50355238E+02	1.43398232E+06	1.32555336E+04	-1.64880954E-02	1.78850128E+00	-1.88136276E-02
1.50000E+02	6.89407788E+02	1.77517948E+06	1.40045146E+04	-1.43788571E-02	1.34186978E+00	-1.68357895E-02
1.75000E+02	7.18147344E+02	2.13256433E+06	1.45557920E+04	-1.32165216E-02	9.60745819E-01	-1.46721008E-02
2.00000E+02	7.37732119E+02	2.50150361E+06	1.49313159E+04	-1.18378002E-02	6.10215303E-01	-1.33309318E-02
2.25000E+02	7.49000606E+02	2.87779873E+06	1.51471771E+04	-1.02370848E-02	2.96183048E-01	-1.17518025E-02
2.50000E+02	7.52959592E+02	3.25769027E+06	1.52227374E+04	-8.65555164E-03	2.92775187E-02	-9.41705869E-03
2.75000E+02	7.50941174E+02	3.63798483E+06	1.51836174E+04	-7.52159398E-03	-1.86188987E-01	-7.92417189E-03
3.00000E+02	7.43947722E+02	4.01607746E+06	1.50491158E+04	-6.52907596E-03	-3.69810528E-01	-6.80051650E-03
3.25000E+02	7.32694051E+02	4.38976015E+06	1.48328941E+04	-5.62909041E-03	-5.27478314E-01	-5.83181597E-03
3.50000E+02	7.17789548E+02	4.75713881E+06	1.45466310E+04	-4.79504273E-03	-6.62159749E-01	-4.95508390E-03
3.75000E+02	6.99860125E+02	6.23977368E+06	-4.59683887E+03	-3.81014550E-03	-7.68704177E-01	-3.76782464E-03
3.85000E+02	6.91992958E+02	6.19378309E+06	-4.60131369E+03	-3.44826902E-03	-8.04568770E-01	-3.40846527E-03
4.00000E+02	6.79565895E+02	6.12279393E+06	-4.86644222E+03	-2.97601617E-03	-8.52039625E-01	-2.93695965E-03
4.25000E+02	6.57432026E+02	5.99530252E+06	-5.33856529E+03	-2.26571335E-03	-9.16184391E-01	-2.20388862E-03
4.50000E+02	6.33922157E+02	5.85562117E+06	-5.84003115E+03	-1.54089657E-03	-9.62121195E-01	-1.45841025E-03
4.75000E+02	6.09496138E+02	5.70313823E+06	-6.36106665E+03	-8.82275077E-04	-9.89905492E-01	-8.03500258E-04
5.00000E+02	5.84555175E+02	5.53747769E+06	-6.89300902E+03	-4.12729809E-04	-1.00382995E+00	-3.36982458E-04
5.25000E+02	5.59394789E+02	5.35844959E+06	-7.42959438E+03	-7.36512737E-05	-1.00786298E+00	-2.02707785E-05
5.50000E+02	5.34229547E+02	5.16599654E+06	-7.96630469E+03	2.65248220E-04	-1.00388979E+00	3.77449695E-04
5.75000E+02	5.09299513E+02	4.96017608E+06	-8.49802822E+03	6.73650977E-04	-9.89220087E-01	7.93341515E-04
5.77000E+02	5.07322692E+02	4.94313786E+06	-8.54018204E+03	7.05597196E-04	-9.87600846E-01	8.25881450E-04
6.00000E+02	4.84863294E+02	4.74118315E+06	-9.01919773E+03	1.06492239E-03	-9.64366719E-01	1.19195334E-03

71577 SYSTEM

6.25000E+02	4.61171741E+02	4.50934848E+06	-9.52450196E+03	1.43801260E-03	-9.29775803E-01	1.57216052E-03
6.50000E+02	4.38461515E+02	4.26513255E+06	-1.00088750E+04	1.79190371E-03	-8.85921156E-01	1.93287378E-03
6.75000E+02	4.16957994E+02	4.00911929E+06	-1.04675105E+04	2.12561996E-03	-8.33303276E-01	2.27304968E-03
7.00000E+02	3.96873725E+02	3.74200937E+06	-1.08958759E+04	2.43823745E-03	-7.72448068E-01	2.59170049E-03
7.25000E+02	3.78407802E+02	3.46461322E+06	-1.12897256E+04	2.72889324E-03	-7.03905339E-01	2.88790346E-03
7.50000E+02	3.61745299E+02	3.17784370E+06	-1.16451127E+04	2.99679396E-03	-6.28247060E-01	3.16080964E-03
7.75000E+02	3.47055353E+02	2.88270848E+06	-1.19584102E+04	3.23367670E-03	-5.46197398E-01	3.38698965E-03
8.00000E+02	3.34482066E+02	2.57281184E+06	-1.64860828E+04	3.42609508E-03	-4.58978239E-01	3.61559029E-03
8.25000E+02	3.24194442E+02	1.80810487E+06	-4.36312064E+04	3.57200583E-03	-3.62608567E-01	4.07351395E-03
8.50000E+02	3.16435283E+02	4.46976881E+05	-6.41006542E+04	3.64491018E-03	-2.57188691E-01	4.34931298E-03
8.75000E+02	3.11371898E+02	-1.33749660E+06	-7.74558383E+04	3.62148765E-03	-1.47767201E-01	4.40386986E-03
9.00000E+02	3.09043376E+02	-3.36568580E+06	-8.35067314E+04	3.49583982E-03	-3.91050930E-02	4.27627657E-03
9.25000E+02	3.09376354E+02	-5.45582143E+06	-8.28595254E+04	3.27675071E-03	6.42484364E-02	3.94497269E-03
9.50000E+02	3.12179103E+02	-7.46900451E+06	-7.74322577E+04	2.98249028E-03	1.58915046E-01	3.60694397E-03
9.75000E+02	3.17228161E+02	-9.29117152E+06	-6.76589055E+04	2.60065111E-03	2.43571856E-01	3.14628745E-03
9.91000E+02	3.21509073E+02	-1.03093953E+07	-5.93738649E+04	2.31523074E-03	2.91149863E-01	2.79405223E-03
1.00000E+03	3.24238256E+02	-1.08203186E+07	-5.40945340E+04	2.14228650E-03	3.15335306E-01	2.57853275E-03
1.02500E+03	3.32853489E+02	-1.19699744E+07	-3.74230986E+04	1.62350816E-03	3.71769421E-01	1.91587612E-03
1.05000E+03	3.42666621E+02	-1.26721415E+07	-1.84331097E+04	1.08137490E-03	4.11130338E-01	1.22538357E-03
1.07500E+03	3.53245138E+02	-1.28793058E+07	2.03453755E+03	5.27844741E-04	4.32817535E-01	5.12661625E-04
1.10000E+03	3.64143595E+02	-1.25652487E+07	2.31228148E+04	-9.11966461E-06	4.36909565E-01	-1.77899335E-04
1.12500E+03	3.74952564E+02	-1.17238101E+07	4.43954470E+04	-4.14585085E-04	4.25940968E-01	-7.07712286E-04
1.13300E+03	3.78334841E+02	-1.13401038E+07	5.15134340E+04	-5.25652878E-04	4.19628184E-01	-8.69075771E-04
1.16000E+03	3.89264293E+02	-9.61931286E+06	7.35192971E+04	-8.56592446E-04	3.87675157E-01	-1.49589068E-03
1.19000E+03	4.00171797E+02	-7.24698456E+06	8.53281649E+04	-1.14580214E-03	3.38168036E-01	-1.79565240E-03
1.20600E+03	4.05346240E+02	-5.84498506E+06	8.94665676E+04	-1.26300149E-03	3.08526131E-01	-1.90204840E-03
1.21200E+03	4.07159878E+02	-5.24867789E+06	9.95382168E+04	-1.36235050E-03	2.96019669E-01	-2.20254398E-03
1.22500E+03	4.10794446E+02	-3.95056129E+06	1.00160008E+05	-1.54268038E-03	2.63144620E-01	-2.93720957E-03
1.24200E+03	4.14678677E+02	-2.24184033E+06	1.00830201E+05	-1.70185390E-03	1.85109602E-01	-7.30353174E-03
1.25000E+03	4.15924875E+02	-1.43429479E+06	1.01042843E+05	-1.74641423E-03	1.26439881E-01	-7.35990551E-03
1.26418E+03	4.16975249E+02	6.30976358E+01	1.01222131E+05	-1.77728561E-03	2.16974272E-02	-7.40073732E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -7.36828445E+00					
1.26418E+03	4.16975249E+02	6.30976358E+01	-2.06208938E+01	-1.77728561E-03	2.16974272E-02	-1.77614000E-03
1.27500E+03	4.17106000E+02	-7.34317447E+00	1.68630177E+00	-1.77728535E-03	2.47111473E-03	-1.77737904E-03
1.28000E+03	4.17096139E+02	4.08337691E-02	3.97803256E-03	-1.77728540E-03	-6.41572240E-03	-1.77728562E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.68532176E+01	2.19494289E+03	8.07512953E+00	1.18802113E+00	1.18759322E+00	0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	3.14511710E-04	3.62946847E-01	3.14511710E-04
1.16200E+03	7.24541589E-01	8.32701735E+03	4.16856688E+03	3.14520030E-04	3.63409336E-01	2.31148692E-04
1.16400E+03	1.45182251E+00	1.66682858E+04	4.17270248E+03	3.14545024E-04	3.63871573E-01	2.31090974E-04
1.16600E+03	2.18002781E+00	2.50178308E+04	4.17684333E+03	3.14586709E-04	3.64333711E-01	2.31049842E-04
1.16800E+03	2.90915731E+00	3.33756627E+04	4.18098944E+03	3.14645101E-04	3.64795783E-01	2.31025312E-04
1.17000E+03	3.63921092E+00	4.17417920E+04	4.18514080E+03	3.14720217E-04	3.65257823E-01	2.31017401E-04
1.18000E+03	7.30334180E+00	8.36972688E+04	4.20597644E+03	3.15347239E-04	3.67568701E-01	2.31227710E-04
1.19000E+03	1.09905990E+01	1.25861759E+05	4.22694359E+03	3.16394859E-04	3.69883770E-01	2.31855987E-04
1.20000E+03	1.47010452E+01	1.68236580E+05	4.24804260E+03	3.17865175E-04	3.72207221E-01	2.32904323E-04
1.20600E+03	1.69384856E+01	1.93762981E+05	4.26076554E+03	3.18951135E-04	3.73607065E-01	2.33735825E-04
1.21000E+03	1.84363212E+01	1.72411052E+05	-5.33352103E+03	3.19439359E-04	3.75310904E-01	4.26109779E-04
1.21200E+03	1.91877953E+01	1.61748282E+05	-5.32924786E+03	3.19662131E-04	3.76163263E-01	4.26247088E-04
1.22000E+03	2.22107463E+01	1.19182954E+05	-5.31205821E+03	3.20411220E-04	3.79575015E-01	4.26652384E-04
1.23000E+03	2.60278336E+01	6.61706968E+04	-5.29035280E+03	3.21028944E-04	3.83842755E-01	4.26836001E-04
1.24000E+03	2.98876016E+01	1.33767070E+04	-5.26840469E+03	3.21293981E-04	3.88110543E-01	4.26662074E-04
1.24200E+03	3.06646759E+01	-6.69687266E-03	-1.33812223E-04	3.21303820E-04	3.88962212E-01	3.21303822E-04

t=100

Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
5.52220215E+01	3.04947166E+03	4.12414275E+02	3.94202709E+02	3.61943426E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	8.53793857E-02	-1.83646172E+01	8.53793857E-02
-3.70000E+01	-2.27253902E+02	-9.48734099E+04	-9.33337010E+03	8.51668454E-02	-1.66324587E+01	8.76893778E-02
-2.50000E+01	-4.20235584E+02	-2.38102862E+05	-1.44795132E+04	8.41987876E-02	-1.55311549E+01	9.27161483E-02
0.	-7.79392902E+02	-7.23028888E+05	-2.40560359E+04	7.91529080E-02	-1.32115153E+01	9.06081631E-02
2.50000E+01	-1.08169944E+03	-1.42825709E+06	-3.21158145E+04	7.26738295E-02	-1.10081303E+01	8.18497765E-02
5.00000E+01	-1.33178865E+03	-2.31725182E+06	-3.87830269E+04	6.77512962E-02	-9.02364481E+00	7.63697466E-02
7.50000E+01	-1.53419115E+03	-3.35681948E+06	-4.41791790E+04	6.35845407E-02	-7.18935642E+00	7.13352739E-02
1.00000E+02	-1.69210704E+03	-4.51631666E+06	-4.83881698E+04	5.84163814E-02	-5.45774510E+00	6.69055340E-02
1.25000E+02	-1.80832353E+03	-5.76694839E+06	-5.14846974E+04	5.16595607E-02	-3.85895776E+00	6.06919637E-02
1.50000E+02	-1.88672958E+03	-7.08213536E+06	-5.35724237E+04	4.32119351E-02	-2.43872365E+00	5.26106059E-02
1.75000E+02	-1.93302391E+03	-8.43846675E+06	-5.48052028E+04	3.85942360E-02	-1.27883118E+00	4.40747563E-02
2.00000E+02	-1.95182953E+03	-9.81628059E+06	-5.53047344E+04	3.31618937E-02	-2.42389364E-01	3.86923672E-02
2.25000E+02	-1.94651035E+03	-1.11983360E+07	-5.51607109E+04	2.69073636E-02	6.48395930E-01	3.24234347E-02
2.50000E+02	-1.92105174E+03	-1.25698258E+07	-5.44796487E+04	2.07772374E-02	1.35509639E+00	2.35025446E-02
2.75000E+02	-1.88055982E+03	-1.39190057E+07	-5.33979858E+04	1.64198281E-02	1.86693302E+00	1.78356204E-02
3.00000E+02	-1.82883489E+03	-1.52372397E+07	-5.20173285E+04	1.26380511E-02	2.25788230E+00	1.35762864E-02
3.25000E+02	-1.76858583E+03	-1.65179829E+07	-5.04096095E+04	9.23736285E-03	2.55072225E+00	9.92632592E-03
3.50000E+02	-1.70210885E+03	-1.77563393E+07	-4.86359670E+04	6.11152662E-03	2.75725404E+00	6.64661664E-03
3.75000E+02	-1.63180212E+03	-1.90863352E+07	6.14387152E+04	2.98191078E-03	2.85591581E+00	2.41627441E-03
3.85000E+02	-1.60314662E+03	-1.84718349E+07	6.14613587E+04	1.88867117E-03	2.87471276E+00	1.35699852E-03
4.00000E+02	-1.55994539E+03	-1.75403171E+07	6.27417635E+04	5.06925906E-04	2.88449997E+00	3.38045285E-06
4.25000E+02	-1.48808490E+03	-1.59451123E+07	6.48712167E+04	-1.45752944E-03	2.85718378E+00	-2.20878846E-03
4.50000E+02	-1.41756108E+03	-1.42970874E+07	6.69610348E+04	-3.30686388E-03	2.77768834E+00	-4.25264121E-03
4.75000E+02	-1.34963609E+03	-1.25977061E+07	6.89739144E+04	-4.84375369E-03	2.65187390E+00	-5.69791982E-03
5.00000E+02	-1.28523524E+03	-1.08492670E+07	7.08821213E+04	-5.82647732E-03	2.49727310E+00	-6.60540173E-03
5.25000E+02	-1.22493378E+03	-9.05461513E+06	7.26687577E+04	-6.44837102E-03	2.32512208E+00	-6.97048489E-03
5.50000E+02	-1.16909177E+03	-7.21692408E+06	7.43233050E+04	-6.96503575E-03	2.13738934E+00	-8.01184287E-03
5.75000E+02	-1.11822676E+03	-5.33968266E+06	7.58304251E+04	-7.47160377E-03	1.93017592E+00	-8.53963793E-03
5.77000E+02	-1.11438352E+03	-5.18790778E+06	7.59442840E+04	-7.50556386E-03	1.91306091E+00	-8.57520166E-03
6.00000E+02	-1.07268803E+03	-3.42671936E+06	7.71796641E+04	-7.82531442E-03	1.71169989E+00	-8.91235194E-03

TRW SYSTEMS

6.25000E+02	-1.03271007E+03	-1.48207349E+06	7.83641251E+04	-8.02344862E-03	1.48587425E+00	-9.12716870E-03
6.50000E+02	-9.98426127E+02	4.90079721E+05	7.93798343E+04	-8.06361902E-03	1.25667774E+00	-9.18164486E-03
6.75000E+02	-9.69870105E+02	2.48550267E+06	8.02257863E+04	-7.94377799E-03	1.02814547E+00	-9.07371864E-03
7.00000E+02	-9.46974442E+02	4.49997014E+06	8.09039820E+04	-7.66221963E-03	8.04359262E-01	-8.80171233E-03
7.25000E+02	-9.29569052E+02	6.52934485E+06	8.14194598E+04	-7.21757578E-03	5.89438114E-01	-8.36432873E-03
7.50000E+02	-9.17380507E+02	8.56965371E+06	8.17803199E+04	-6.60880580E-03	3.87528800E-01	-7.76064129E-03
7.75000E+02	-9.10032315E+02	1.06171648E+07	8.19978098E+04	-5.86183891E-03	2.03429650E-01	-6.91309288E-03
8.00000E+02	-9.07015723E+02	1.26697028E+07	8.27435591E+04	-5.04320980E-03	4.10702584E-02	-5.99428519E-03
8.25000E+02	-9.07761421E+02	1.47301109E+07	7.99673952E+04	-4.15322676E-03	-9.78472014E-02	-5.07239222E-03
8.50000E+02	-9.11658637E+02	1.65716978E+07	6.56472508E+04	-3.17956175E-03	-2.10038999E-01	-3.90096011E-03
8.75000E+02	-9.17978889E+02	1.79383588E+07	4.24499971E+04	-2.17665671E-03	-2.91107977E-01	-2.60544456E-03
9.00000E+02	-9.25927423E+02	1.86457087E+07	1.42674791E+04	-1.18346570E-03	-3.39834777E-01	-1.31680662E-03
9.25000E+02	-9.34704765E+02	1.86881389E+07	-1.07246458E+04	-2.46581744E-04	-3.57798477E-01	-1.60092665E-04
9.50000E+02	-9.43577923E+02	1.81203880E+07	-3.45951089E+04	5.92237793E-04	-3.48845350E-01	8.71230606E-04
9.75000E+02	-9.51909875E+02	1.69705377E+07	-5.70101006E+04	1.39188301E-03	-3.14661901E-01	1.85164189E-03
9.91000E+02	-9.56674798E+02	1.59538599E+07	-6.98287130E+04	1.87128014E-03	-2.80318161E-01	2.43441492E-03
1.00000E+03	-9.59092776E+02	1.52957272E+07	-7.63291379E+04	2.12703829E-03	-2.57010133E-01	2.74259585E-03
1.02500E+03	-9.64568127E+02	1.31923671E+07	-9.10612676E+04	2.77504682E-03	-1.78584917E-01	3.48646297E-03
1.05000E+03	-9.67869151E+02	1.07914470E+07	-9.99493537E+04	3.30182066E-03	-8.36473487E-02	4.08267498E-03
1.07500E+03	-9.68634413E+02	8.25185162E+06	-1.02017700E+05	3.71354157E-03	2.36111790E-02	4.47486769E-03
1.10000E+03	-9.66612438E+02	5.75305811E+06	-9.65956159E+04	4.00800962E-03	1.38834862E-01	4.71308711E-03
1.12500E+03	-9.61681659E+02	3.48801678E+06	-8.30646886E+04	4.16163419E-03	2.55892336E-01	4.71008052E-03
1.13300E+03	-9.59483873E+02	2.84860983E+06	-7.66402986E+04	4.19211477E-03	2.93554256E-01	4.70305009E-03
1.16000E+03	-9.49843855E+02	1.14581613E+06	-5.02445460E+04	4.25323224E-03	4.20503985E-01	4.69014133E-03
1.19000E+03	-9.35036344E+02	-9.54039286E+05	-5.76132447E+04	4.25431158E-03	5.65445567E-01	4.69308795E-03
1.20600E+03	-9.25395944E+02	-1.78465829E+06	-4.70112787E+04	4.22958179E-03	6.39468135E-01	4.56537664E-03
1.21200E+03	-9.21487007E+02	-1.62462741E+06	2.71379086E+04	4.19904258E-03	6.63510799E-01	3.96997384E-03
1.22500E+03	-9.12534687E+02	-1.25820624E+06	2.92604422E+04	4.14244911E-03	7.13769257E-01	3.73505556E-03
1.24200E+03	-8.99914303E+02	-7.35643122E+05	3.22549588E+04	4.09099520E-03	7.68135622E-01	2.29905304E-03
1.25000E+03	-8.92697204E+02	-4.71731776E+05	3.37285678E+04	4.07633730E-03	7.86138959E-01	2.20252798E-03
1.26418E+03	-8.82336038E+02	2.55145285E+04	3.64217591E+04	4.06659891E-03	8.16222308E-01	2.04316785E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -2.07474646E+00					
1.26418E+03	-8.82336038E+02	2.55145285E+04	-3.18451296E+03	4.06659891E-03	8.16222308E-01	4.24351630E-03
1.27500E+03	-8.73259565E+02	2.59276892E+03	-1.03306298E+03	4.06699766E-03	8.61499173E-01	4.12439005E-03
1.28000E+03	-8.68900871E+02	-2.74203028E-07	-1.49941597E-09	4.06701085E-03	8.81978254E-01	4.06701085E-03

+100,3

RW SYSTEMS

BEAM 2						
OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
5.52220215E+01	3.04947166E+03	8.07512953E+00	2.62866952E+01	2.42138105E+01		0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	2.23027819E-02	1.33453308E-01	2.23027819E-02
1.16200E+03	3.09442707E-01	7.01154228E+04	3.50605236E+04	2.23028520E-02	1.76656610E-01	2.16016415E-02
1.16400E+03	7.05959295E-01	1.40239489E+05	3.50636562E+04	2.23030623E-02	2.19860020E-01	2.16017892E-02
1.16600E+03	1.18888309E+00	2.10370503E+05	3.50674714E+04	2.23034129E-02	2.63063852E-01	2.16020635E-02
1.16800E+03	1.75821518E+00	2.80509829E+05	3.50719692E+04	2.23039038E-02	3.06268359E-01	2.16024644E-02
1.17000E+03	2.41395718E+00	3.50658835E+05	3.50771497E+04	2.23045350E-02	3.49473794E-01	2.16029920E-02
1.18000E+03	6.98890741E+00	7.01596823E+05	3.51132926E+04	2.23097960E-02	5.65523764E-01	2.16075301E-02
1.19000E+03	1.37246372E+01	1.05298159E+06	3.51665062E+04	2.23185684E-02	7.81634963E-01	2.16152383E-02
1.20000E+03	2.26219175E+01	1.40498387E+06	3.52367963E+04	2.23308577E-02	9.97839114E-01	2.16261217E-02
1.20600E+03	2.89982695E+01	1.61655269E+06	3.52871707E+04	2.23399221E-02	1.12761944E+00	2.16341787E-02
1.21000E+03	3.36934391E+01	1.46755326E+06	-3.72302340E+04	2.23440342E-02	1.21996748E+00	2.30886389E-02
1.21200E+03	3.61795524E+01	1.39311231E+06	-3.72105933E+04	2.23459413E-02	1.26614629E+00	2.30901532E-02
1.22000E+03	4.70476652E+01	1.09576322E+06	-3.71247332E+04	2.23525780E-02	1.45088840E+00	2.30950727E-02
1.23000E+03	6.27113748E+01	7.25119412E+05	-3.70009870E+04	2.23586469E-02	1.68185946E+00	2.30986667E-02
1.24000E+03	8.06849273E+01	3.55804307E+05	-3.68589926E+04	2.23622492E-02	1.91285230E+00	2.30994291E-02
1.24200E+03	8.45568306E+01	6.58060108E-09	-2.03902364E-08	2.23625803E-02	1.95903991E+00	2.23625803E-02

t/100,3²²⁰

t=100

Mode 4

Atlas SLV3A/Burner Z

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
6.87969226E+01	4.73301656E+03	4.12414275E+02	9.02415456E+01	8.84172244E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	2.99653819E-02	-5.43741802E+00	2.99653819E-02
-3.70000E+01	-6.63169323E+01	-4.33338900E+04	-4.24915451E+03	2.98681486E-02	-4.82688901E+00	3.10165687E-02
-2.50000E+01	-1.21873292E+02	-1.08316714E+05	-6.54870174E+03	2.94269900E-02	-4.43250422E+00	3.32791675E-02
0.	-2.22229041E+02	-3.25749035E+05	-1.67018985E+04	2.71432448E-02	-3.60082270E+00	3.22393870E-02
2.50000E+01	-3.02338400E+02	-6.36418263E+05	-1.40165745E+04	2.42398817E-02	-2.82389484E+00	2.82446173E-02
5.00000E+01	-3.64325870E+02	-1.02035232E+06	-1.65811173E+04	2.20591038E-02	-2.14618585E+00	2.57437965E-02
7.50000E+01	-4.10238422E+02	-1.45993576E+06	-1.84807447E+04	2.02351443E-02	-1.53610695E+00	2.34773802E-02
1.00000E+02	-4.41520461E+02	-1.93933746E+06	-1.97742134E+04	1.80023245E-02	-9.72718480E-01	2.14714847E-02
1.25000E+02	-4.59431592E+02	-2.44402606E+06	-2.05139434E+04	1.51205583E-02	-4.68756770E-01	1.87194958E-02
1.50000E+02	-4.65692597E+02	-2.96100752E+06	-2.07711392E+04	1.15653176E-02	-4.30673663E-02	1.52093771E-02
1.75000E+02	-4.62723428E+02	-3.47942183E+06	-2.06472171E+04	9.64836878E-03	2.74588117E-01	1.17130905E-02
2.00000E+02	-4.52455609E+02	-3.99084716E+06	-2.02210688E+04	7.42454521E-03	5.39776365E-01	9.44665209E-03
2.25000E+02	-4.36304870E+02	-4.48844243E+06	-1.95512883E+04	4.90011567E-03	7.44211271E-01	6.85524450E-03
2.50000E+02	-4.15911305E+02	-4.96694063E+06	-1.87059442E+04	2.45921844E-03	8.74534783E-01	3.39497053E-03
2.75000E+02	-3.93266724E+02	-5.42297999E+06	-1.77676343E+04	7.49187380E-04	9.30378549E-01	1.22027783E-03
3.00000E+02	-3.69826223E+02	-5.85505419E+06	-1.67966930E+04	-7.14247387E-04	9.39813600E-01	-4.11285841E-04
3.25000E+02	-3.46626954E+02	-6.26290082E+06	-1.58358721E+04	-2.01237411E-03	9.11833821E-01	-1.79594056E-03
3.50000E+02	-3.24540130E+02	-6.64723332E+06	-1.49211732E+04	-3.19006416E-03	8.51294399E-01	-3.02590230E-03
3.75000E+02	-3.04442851E+02	-3.44562737E+06	3.74464841E+04	-3.83697082E-03	7.53989431E-01	-4.18172239E-03
3.85000E+02	-2.97116008E+02	-3.07111717E+06	3.74554693E+04	-4.02672476E-03	7.11304683E-01	-4.35073401E-03
4.00000E+02	-2.86946624E+02	-2.50571964E+06	3.79231927E+04	-4.24124388E-03	6.44479621E-01	-4.54560337E-03
4.25000E+02	-2.72297014E+02	-1.54893566E+06	3.85968935E+04	-4.48013955E-03	5.26449017E-01	-4.92712152E-03
4.50000E+02	-2.60692172E+02	-5.77042939E+05	3.91305472E+04	-4.60989896E-03	4.00990049E-01	-5.16259031E-03
4.75000E+02	-2.52278496E+02	4.06364644E+05	3.95174045E+04	-4.62279858E-03	2.72334090E-01	-5.11217820E-03
5.00000E+02	-2.47054381E+02	1.39760411E+06	3.97575659E+04	-4.54978731E-03	1.46066362E-01	-4.98668363E-03
5.25000E+02	-2.44940698E+02	2.39305058E+06	3.98546966E+04	-4.43357889E-03	2.36914684E-02	-4.71992876E-03
5.50000E+02	-2.45837812E+02	3.38918986E+06	3.98133378E+04	-4.24211611E-03	-9.64903408E-02	-4.80286734E-03
5.75000E+02	-2.49716058E+02	4.38257039E+06	3.96348205E+04	-3.92870867E-03	-2.12783830E-01	-4.48694558E-03
5.77000E+02	-2.50150571E+02	4.46182019E+06	3.96148406E+04	-3.90017836E-03	-2.21728996E-01	-4.45813386E-03
6.00000E+02	-2.56394188E+02	5.36985724E+06	3.93275515E+04	-3.53541397E-03	-3.20156692E-01	-4.08932315E-03

t=100, y 221

TRW SYSTEMS

6.25000E+02	-2.65621981E+02	6.34798954E+06	3.89029559E+04	-3.06284960E-03	-4.16575554E-01	-3.61077855E-03
6.50000E+02	-2.77101293E+02	7.31414119E+06	3.83747837E+04	-2.51186927E-03	-5.00029923E-01	-3.05235918E-03
6.75000E+02	-2.90483198E+02	8.26597861E+06	3.77590800E+04	-1.88353515E-03	-5.68538561E-01	-2.41535318E-03
7.00000E+02	-3.05369664E+02	9.20151761E+06	3.70741476E+04	-1.17908552E-03	-6.20155108E-01	-1.70125661E-03
7.25000E+02	-3.21314490E+02	1.01192794E+07	3.63405045E+04	-3.99897822E-04	-6.52972817E-01	-9.11735914E-04
7.50000E+02	-3.37824341E+02	1.10183253E+07	3.55808360E+04	4.52552624E-04	-6.65128300E-01	-4.85859115E-05
7.75000E+02	-3.54362754E+02	1.18983105E+07	3.48199815E+04	1.34634823E-03	-6.54601142E-01	8.99938211E-04
8.00000E+02	-3.70346221E+02	1.27379438E+07	2.17663348E+04	2.21384389E-03	-6.20699683E-01	1.96365613E-03
8.25000E+02	-3.85036919E+02	1.22149692E+07	-6.19043122E+04	3.03533100E-03	-5.49002637E-01	3.74687481E-03
8.50000E+02	-3.97421514E+02	9.75280504E+06	-1.32412799E+05	3.72708649E-03	-4.36946203E-01	5.18217219E-03
8.75000E+02	-4.06621601E+02	5.74627080E+06	-1.84779659E+05	4.18461150E-03	-2.96255615E-01	6.05107270E-03
9.00000E+02	-4.12089862E+02	6.91728702E+05	-2.15239089E+05	4.36478750E-03	-1.40228761E-01	6.37636777E-03
9.25000E+02	-4.13607533E+02	-4.81086412E+06	-2.22064982E+05	4.26699428E-03	1.70556089E-02	6.05784092E-03
9.50000E+02	-4.11327562E+02	-1.02753246E+07	-2.12537374E+05	3.92322281E-03	1.64019381E-01	5.63723390E-03
9.75000E+02	-4.05547780E+02	-1.53156938E+07	-1.88399383E+05	3.33932078E-03	2.95926939E-01	4.85867065E-03
9.91000E+02	-4.00226442E+02	-1.81587819E+07	-1.66180497E+05	2.85155801E-03	3.68492292E-01	4.19172331E-03
1.00000E+03	-3.96748758E+02	-1.95901173E+07	-1.51670128E+05	2.54252543E-03	4.04326248E-01	3.76567163E-03
1.02500E+03	-3.85614060E+02	-2.28176916E+07	-1.05183590E+05	1.57575800E-03	4.82095258E-01	2.39750480E-03
1.05000E+03	-3.72980681E+02	-2.47970349E+07	-5.24351667E+04	5.26751947E-04	5.24021190E-01	9.36401687E-04
1.07500E+03	-3.59763938E+02	-2.54192008E+07	2.73606335E+03	-5.62416796E-04	5.28334549E-01	-5.82835180E-04
1.10000E+03	-3.46911042E+02	-2.46728475E+07	5.63989006E+04	-1.62061446E-03	4.95386574E-01	-2.03228527E-03
1.12500E+03	-3.35279100E+02	-2.26401987E+07	1.05744632E+05	-2.41114322E-03	4.31349247E-01	-3.10933707E-03
1.13300E+03	-3.31933013E+02	-2.17328550E+07	1.20933039E+05	-2.62484410E-03	4.05172572E-01	-3.43106435E-03
1.16000E+03	-3.22411097E+02	-1.78169359E+07	1.62749826E+05	-3.24934828E-03	2.95663724E-01	-4.66456415E-03
1.19000E+03	-3.16520992E+02	-6.18723225E+06	3.94183202E+05	-3.66121627E-03	9.64646331E-02	-6.66327378E-03
1.20600E+03	-3.15825055E+02	1.35125319E+05	3.95513679E+05	-3.71548077E-03	-9.32284025E-03	-6.54057848E-03
1.21200E+03	-3.15947614E+02	1.25024704E+05	-1.71006477E+03	-3.71315066E-03	-3.15302754E-02	-3.69871615E-03
1.22500E+03	-3.16669410E+02	1.01316052E+05	-1.97566876E+03	-3.70870308E-03	-7.95151966E-02	-3.68119582E-03
1.24200E+03	-3.18548685E+02	6.23985359E+04	-2.66740586E+03	-3.70444569E-03	-1.41331303E-01	-3.55625648E-03
1.25000E+03	-3.19792720E+02	3.92842077E+04	-3.12507766E+03	-3.70320584E-03	-1.69677406E-01	-3.52959042E-03
1.26418E+03	-3.22550992E+02	-1.19191949E+04	-4.14000351E+03	-3.70256559E-03	-2.19337078E-01	-3.47256539E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =	1.88648229E-01				
1.26418E+03	-3.22550992E+02	-1.19191949E+04	1.44939521E+03	-3.70256559E-03	-2.19337078E-01	-3.78308754E-03
1.27500E+03	-3.25144166E+02	-1.25250059E+03	4.95303893E+02	-3.70275406E-03	-2.59992764E-01	-3.73027094E-03
1.28000E+03	-3.26490588E+02	7.69765044E-15	1.15098660E-17	-3.70276046E-03	-2.78576141E-01	-3.70276046E-03

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TRW SYSTEMS

FORM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
6.87969226E+01	4.73301656E+03	8.07512953E+00	3.30247859E+02	2.82735808E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-1.06718650E-01	2.07260545E+00	-1.06718650E-01
1.16200E+03	3.92935252E+00	-3.97017979E+05	-1.98448418E+05	-1.06719047E-01	1.86710824E+00	-1.02750079E-01
1.16400E+03	7.45806749E+00	-7.93870708E+05	-1.98405150E+05	-1.06720238E-01	1.66160614E+00	-1.02752135E-01
1.16600E+03	1.05757737E+01	-1.19064194E+06	-1.98366922E+05	-1.06722223E-01	1.45609924E+00	-1.02754884E-01
1.16800E+03	1.32824600E+01	-1.58734175E+06	-1.98333733E+05	-1.06725001E-01	1.25058614E+00	-1.02758326E-01
1.17000E+03	1.55781128E+01	-1.98398023E+06	-1.98305585E+05	-1.06728572E-01	1.04506547E+00	-1.02762461E-01
1.18000E+03	2.08901973E+01	-3.96660538E+06	-1.98240449E+05	-1.06758326E-01	1.73000059E+02	-1.02793517E-01
1.19000E+03	1.59227849E+01	-5.94920936E+06	-1.98301358E+05	-1.06807904E-01	-1.01086254E+00	-1.02841877E-01
1.20000E+03	6.71039708E-01	-7.93305289E+06	-1.98488370E+05	-1.06877314E-01	-2.03959523E+00	-1.02907547E-01
1.20600E+03	-1.34191470E+01	-9.12447870E+06	-1.98661140E+05	-1.06928486E-01	-2.65718054E+00	-1.02955263E-01
1.21000E+03	-2.49347271E+01	-8.34044808E+06	-1.95932188E+05	-1.06951772E-01	-3.10062237E+00	-1.10870416E-01
1.21200E+03	-3.13577194E+01	-7.94866155E+06	-1.95853431E+05	-1.06962632E-01	-3.32237259E+00	-1.10879701E-01
1.22000E+03	-6.14852080E+01	-6.38325374E+06	-1.95484017E+05	-1.07000849E-01	-4.20954024E+00	-1.10910528E-01
1.23000E+03	-1.09126610E+02	-4.43122105E+06	-1.94899852E+05	-1.07036894E-01	-5.31878045E+00	-1.10934891E-01
1.24000E+03	-1.67861369E+02	-2.48571011E+06	-1.94179664E+05	-1.07059946E-01	-6.42818568E+00	-1.10943540E-01
1.24200E+03	-1.80939627E+02	1.83779889E-15	1.27023793E-09	-1.07062302E-01	-6.65001427E+00	-1.07062302E-01

1/10/1

t=100

Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA OMEGA_SQUARED TOTAL MASS GENERALIZED MASS INTG. PHI SQ DM ACCELERATION

9.74601675E+01 9.49848424E+03 4.12414275E+02 3.84636275E+02 3.03122684E+02 0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-6.15934711E-02	8.49807204E+00	-6.15934711E-02
-3.70000E+01	1.00556148E+02	1.34231005E+05	1.30723572E+04	-6.12912831E-02	7.23145283E+00	-6.48243526E-02
-2.50000E+01	1.82262081E+02	3.32670150E+05	1.98606290E+04	-5.99312844E-02	6.38620271E+00	-7.16140074E-02
0.	3.19430016E+02	9.79341184E+05	3.12528876E+04	-5.29951091E-02	4.60405887E+00	-6.78774365E-02
2.50000E+01	4.13900984E+02	1.86569449E+06	3.90950014E+04	-4.43723615E-02	3.90258861E+00	-5.55423619E-02
5.00000E+01	4.72308170E+02	2.90927699E+06	4.39410331E+04	-3.80646761E-02	1.70313030E+00	-4.78293502E-02
7.50000E+01	5.00832960E+02	4.04210429E+06	4.63075817E+04	-3.29359721E-02	6.06112761E-01	-4.10601093E-02
1.00000E+02	5.03813803E+02	5.20693883E+06	4.65485831E+04	-2.68517265E-02	3.48784805E-01	-3.50181446E-02
1.25000E+02	4.85028959E+02	6.35442360E+06	4.49799155E+04	-1.92412549E-02	1.12940675E+00	-2.71324681E-02
1.50000E+02	4.49398984E+02	7.44423320E+06	4.20103632E+04	-1.01550365E-02	1.69104320E+00	-1.75252757E-02
1.75000E+02	4.03219912E+02	8.44776495E+06	3.81695919E+04	-5.42050883E-03	1.98733532E+00	-9.23746802E-03
2.00000E+02	3.51307654E+02	9.34872950E+06	3.38520006E+04	-1.18575109E-04	2.14778767E+00	-3.50377517E-03
2.25000E+02	2.97239648E+02	1.01388599E+07	2.93547982E+04	5.68688374E-03	2.15817665E+00	2.75140391E-03
2.50000E+02	2.44935776E+02	1.08176768E+07	2.50048240E+04	1.11085932E-02	2.00075957E+00	9.85774398E-03
2.75000E+02	1.98553899E+02	1.13932679E+07	2.11479717E+04	1.47684013E-02	1.69645181E+00	1.42076847E-02
3.00000E+02	1.60984062E+02	1.18812001E+07	1.80241910E+04	1.77909407E-02	1.29905513E+00	1.74658388E-02
3.25000E+02	1.34294511E+02	1.23020213E+07	1.58046404E+04	2.03829087E-02	8.27735923E-01	2.01669020E-02
3.50000E+02	1.20185490E+02	1.26801480E+07	1.46303116E+04	2.26624346E-02	2.93742925E-01	2.25014728E-02
3.75000E+02	1.19691463E+02	2.04120909E+07	1.84074889E+04	1.97868586E-02	2.44233001E-01	1.99563274E-02
3.85000E+02	1.23103997E+02	2.05961276E+07	1.83990734E+04	1.85934033E-02	4.37734955E-01	1.87525648E-02
4.00000E+02	1.31695177E+02	2.08666186E+07	1.76043107E+04	1.70042369E-02	7.06615766E-01	1.71455235E-02
4.25000E+02	1.54435102E+02	2.12823793E+07	1.55037490E+04	1.45345975E-02	1.10409891E+00	1.47141429E-02
4.50000E+02	1.86333130E+02	2.16347614E+07	1.25579893E+04	1.19091117E-02	1.43913376E+00	1.20864845E-02
4.75000E+02	2.25770612E+02	2.19044742E+07	8.91582718E+03	9.43048917E-03	1.70781453E+00	9.54090189E-03
5.00000E+02	2.71214947E+02	2.20759542E+07	4.72051744E+03	7.59480673E-03	1.92142603E+00	7.64668055E-03
5.25000E+02	3.21467248E+02	2.21368153E+07	8.21191988E+01	6.21987580E-03	2.09384888E+00	6.22046581E-03
5.50000E+02	3.75620187E+02	2.20770573E+07	4.91665814E+03	4.79215326E-03	2.23337282E+00	4.72290455E-03
5.75000E+02	4.32713199E+02	2.18887136E+07	1.01873412E+04	3.01845421E-03	2.32832105E+00	2.87497053E-03
5.77000E+02	4.37375444E+02	2.18679088E+07	1.06175684E+04	2.87730335E-03	2.33392376E+00	2.72776013E-03
6.00000E+02	4.91608353E+02	2.15663080E+07	1.56239222E+04	1.26532199E-03	2.37727316E+00	1.04526675E-03

6.25000E+02	5.51154694E+02	-2.11070144E+07	2.11279349E+04	-4.56300229E-04	2.38083984E+00	-7.53778185E-04
6.50000E+02	6.10232738E+02	-2.05106226E+07	2.65746819E+04	-2.13534721E-03	2.33994416E+00	-2.50963851E-03
6.75000E+02	6.67745883E+02	-1.97794852E+07	3.18839560E+04	-3.76084051E-03	2.25582125E+00	-4.20991031E-03
7.00000E+02	7.22632247E+02	-1.89184466E+07	3.69507539E+04	-5.32209242E-03	2.13001261E+00	-5.84252558E-03
7.25000E+02	7.73872200E+02	-1.79347537E+07	4.16809723E+04	-6.80890344E-03	1.96435505E+00	-7.39595939E-03
7.50000E+02	8.20495551E+02	-1.68379506E+07	4.59850704E+04	-8.21175189E-03	1.76096463E+00	-8.85942894E-03
7.75000E+02	8.61595344E+02	-1.56397555E+07	4.97788634E+04	-9.48116708E-03	1.52279509E+00	-1.01193576E-02
8.00000E+02	8.96372411E+02	-1.42650080E+07	1.03505605E+05	-1.05375530E-02	1.25498166E+00	-1.17272726E-02
8.25000E+02	9.23533572E+02	-7.58611505E+06	4.14117486E+05	-1.12890633E-02	9.04472809E-01	-1.60490344E-02
8.50000E+02	9.40863883E+02	5.49772553E+06	6.12154937E+05	-1.13816812E-02	4.74942390E-01	-1.81086585E-02
8.75000E+02	9.47124815E+02	2.19595011E+07	6.83597301E+05	-1.06014119E-02	2.86586535E-02	-1.75064351E-02
9.00000E+02	9.42621235E+02	3.86538741E+07	6.35289156E+05	-8.96308312E-03	-3.78097889E-01	-1.49003650E-02
9.25000E+02	9.28887031E+02	5.31425763E+07	5.13876281E+05	-6.66493124E-03	-7.03172502E-01	-1.08090948E-02
9.50000E+02	9.08383718E+02	6.39361312E+07	3.41889284E+05	-3.98774324E-03	-9.24398819E-01	-6.74491489E-03
9.75000E+02	8.83708792E+02	6.99444747E+07	1.34925267E+05	-9.25378900E-04	-1.03483659E+00	-2.01348589E-03
9.91000E+02	8.67068838E+02	7.09880702E+07	-4.62645294E+03	1.12995574E-03	-1.04165642E+00	1.16726584E-03
1.00000E+03	8.57777453E+02	7.05951147E+07	-8.24640276E+04	2.28931764E-03	-1.02309587E+00	2.95435013E-03
1.02500E+03	8.33686576E+02	6.59495433E+07	-2.84499682E+05	5.40754638E-03	-8.89000155E-01	7.63020014E-03
1.05000E+03	8.14333327E+02	5.67019479E+07	-4.46867654E+05	8.11212588E-03	-6.46911113E-01	1.16032247E-02
1.07500E+03	8.02140769E+02	4.41092496E+07	-5.49146748E+05	1.02997932E-02	-3.19826566E-01	1.43979033E-02
1.10000E+03	7.98878226E+02	2.98696314E+07	-5.76638635E+05	1.18603887E-02	6.37226440E-02	1.60694298E-02
1.12500E+03	8.05422556E+02	1.59677188E+07	-5.20384586E+05	1.26243094E-02	4.61411157E-01	1.60602220E-02
1.13300E+03	8.09626666E+02	1.19515469E+07	-4.82102898E+05	1.27585866E-02	5.89616398E-01	1.59726059E-02
1.16000E+03	8.31332701E+02	1.39775037E+06	-2.98559711E+05	1.29566703E-02	1.01685779E+00	1.55528417E-02
1.19000E+03	8.67907765E+02	4.15728870E+05	6.29171940E+04	1.29697597E-02	1.41438853E+00	1.24905890E-02
1.20600E+03	8.92102538E+02	2.13449136E+06	1.45781963E+05	1.29905511E-02	1.60940848E+00	1.19492513E-02
1.21200E+03	9.02002798E+02	1.71878780E+06	-6.55997001E+04	1.30249926E-02	1.69067822E+00	1.35787140E-02
1.22500E+03	9.25135854E+02	9.75137984E+05	-4.85241342E+04	1.30770651E-02	1.86825348E+00	1.37526673E-02
1.24200E+03	9.58915857E+02	3.57900581E+05	-2.35932564E+04	1.31095013E-02	2.10737501E+00	1.44202377E-02
1.25000E+03	9.76225160E+02	2.19835066E+05	-1.08123432E+04	1.31162972E-02	2.21995073E+00	1.37169829E-02
1.26418E+03	1.00902045E+03	2.35975960E+05	1.34117550E+04	1.31248779E-02	2.40510300E+00	1.23797804E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-7.20051200E-01		
1.26418E+03	1.00902045E+03	2.35975960E+05	-2.94028576E+04	1.31248779E-02	2.40510300E+00	1.47583700E-02
1.27500E+03	1.03587579E+03	2.40272382E+04	-9.56969517E+03	1.31285687E-02	2.55891533E+00	1.36602184E-02
1.28000E+03	1.04883782E+03	3.24664225E-11	-1.86579795E-12	1.31286909E-02	2.62589347E+00	1.31286909E-02

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
9.74601675E+01	9.49848424E+03	8.07512953E+00	3.58531291E+01	2.58212935E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE I/IN	Y/Q EQ. PHI	PHI PRIME I/IN
1.16000E+03	0.	0.	0.	-4.89797963E-02	2.29622174E+00	-4.89797963E-02
1.16200E+03	4.48783781E+00	-2.41561404E+05	-1.20643805E+05	-4.89800380E-02	2.20309322E+00	-4.65671619E-02
1.16400E+03	8.80088795E+00	-4.82742118E+05	-1.20537672E+05	-4.89807624E-02	2.10995611E+00	-4.65700089E-02
1.16600E+03	1.29276579E+01	-7.23715149E+05	-1.20436123E+05	-4.89819688E-02	2.01681292E+00	-4.65732464E-02
1.16800E+03	1.68681347E+01	-9.64489665E+05	-1.20339158E+05	-4.89836571E-02	1.92366286E+00	-4.65768739E-02
1.17000E+03	2.06223039E+01	-1.20507484E+06	-1.20246777E+05	-4.89858267E-02	1.83050516E+00	-4.65808911E-02
1.18000E+03	3.65979180E+01	-2.40548146E+06	-1.19853657E+05	-4.90038827E-02	1.36457475E+00	-4.66068096E-02
1.19000E+03	4.79127699E+01	-3.60253028E+06	-1.19575228E+05	-4.90339251E-02	8.98336665E-01	-4.66424206E-02
1.20000E+03	5.45632987E+01	-4.79736860E+06	-1.19411575E+05	-4.90759260E-02	4.31694133E-01	-4.66876945E-02
1.20600E+03	5.63128977E+01	-5.51368820E+06	-1.19368521E+05	-4.91068593E-02	1.51474318E-01	-4.67194888E-02
1.21000E+03	5.65099643E+01	-5.11527045E+06	9.96055358E+04	-4.91210312E-02	-5.29501725E-02	-5.11131419E-02
1.21200E+03	5.63018329E+01	-4.91606366E+06	9.96004142E+04	-4.91277188E-02	-1.55183103E-01	-5.11197271E-02
1.22000E+03	5.34242781E+01	-4.11948990E+06	9.95296049E+04	-4.91518133E-02	-5.64235539E-01	-5.11424054E-02
1.23000E+03	4.52244280E+01	-3.12509784E+06	9.93278273E+04	-4.91759608E-02	-1.07576778E+00	-5.11625174E-02
1.24000E+03	3.19084029E+01	-2.13335301E+06	9.90001536E+04	-4.91934872E-02	-1.58745542E+00	-5.11734903E-02
1.24200E+03	2.86311445E+01	1.48127804E-10	2.36094864E-08	-4.91955541E-02	-1.68977367E+00	-4.91955541E-02

t=120

Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.44618039E+01	5.98379848E+02	3.31378005E+02	3.20147500E+02	2.68194465E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-1.92954425E-02	7.91464111E+00 -1.92954425E-02
-3.70000E+01	1.01507651E+02	8.14681166E+03	8.07913821E+02	-1.92772633E-02	7.52662167E+00 -1.94956184E-02
-2.50000E+01	1.90397589E+02	2.06472085E+04	1.27299311E+03	-1.91936716E-02	7.28836797E+00 -1.99424911E-02
0.	3.66357453E+02	6.41159909E+04	2.19361259E+03	-1.87508549E-02	6.78917241E+00 -1.97954323E-02
2.50000E+01	5.29924404E+02	1.29787250E+05	3.04937764E+03	-1.81693555E-02	6.29923326E+00 -1.90406063E-02
5.00000E+01	6.81492733E+02	2.16062344E+05	3.84236094E+03	-1.77163625E-02	5.82842128E+00 -1.85702204E-02
7.50000E+01	8.21460830E+02	3.21399617E+05	4.57465825E+03	-1.73228866E-02	5.37089995E+00 -1.81254582E-02
1.00000E+02	9.50109635E+02	4.44301576E+05	5.24771597E+03	-1.68209808E-02	4.92220292E+00 -1.77416327E-02
1.25000E+02	1.06768184E+03	5.83302195E+05	5.86280894E+03	-1.61466117E-02	4.48534087E+00 -1.71751747E-02
1.50000E+02	1.17453279E+03	7.36974263E+05	6.42179486E+03	-1.52795410E-02	4.06513266E+00 -1.64061717E-02
1.75000E+02	1.27123411E+03	9.03950007E+05	6.92770121E+03	-1.47917980E-02	3.67233627E+00 -1.54845682E-02
2.00000E+02	1.35826464E+03	1.08293751E+06	7.38300299E+03	-1.42010271E-02	3.29180523E+00 -1.49393274E-02
2.25000E+02	1.43596558E+03	1.27269321E+06	7.78948492E+03	-1.35004505E-02	2.92632586E+00 -1.42793990E-02
2.50000E+02	1.50476108E+03	1.47202300E+06	8.14936869E+03	-1.27940078E-02	2.58141061E+00 -1.32016744E-02
2.75000E+02	1.56526137E+03	1.67980063E+06	8.46585392E+03	-1.22761857E-02	2.26075200E+00 -1.25006490E-02
3.00000E+02	1.61793842E+03	1.89497485E+06	8.74142072E+03	-1.18129963E-02	1.95505262E+00 -1.19706651E-02
3.25000E+02	1.66312963E+03	2.11654538E+06	8.97782659E+03	-1.13837820E-02	1.66168409E+00 -1.15064846E-02
3.50000E+02	1.70112696E+03	2.34355259E+06	9.17659700E+03	-1.09773305E-02	1.37943233E+00 -1.10782908E-02
3.75000E+02	1.73218412E+03	3.81751424E+06	1.98469188E+04	-1.04209124E-02	1.10697961E+00 -1.06036333E-02
3.85000E+02	1.74272918E+03	4.01599174E+06	1.98485533E+04	-1.01929749E-02	1.00213984E+00 -1.03646752E-02
4.00000E+02	1.75661246E+03	4.31434182E+06	1.99292349E+04	-9.87401569E-03	8.49200300E-01 -1.00339614E-02
4.25000E+02	1.77476194E+03	4.81396527E+06	2.00347129E+04	-9.33979289E-03	6.04491269E-01 -9.57181041E-03
4.50000E+02	1.78695301E+03	5.31578872E+06	2.01055490E+04	-8.72012057E-03	3.72577571E-01 -9.00409725E-03
4.75000E+02	1.7935323E+03	5.81897067E+06	2.01437654E+04	-8.08783028E-03	1.56140271E-01 -8.33728868E-03
5.00000E+02	1.79489796E+03	6.32272441E+06	2.01516559E+04	-7.58228046E-03	-4.53215480E-02 -7.80372723E-03
5.25000E+02	1.79137903E+03	6.82631715E+06	2.01311768E+04	-7.17433657E-03	-2.34652217E-01 -7.31897599E-03
5.50000E+02	1.78325146E+03	7.32906024E+06	2.00838967E+04	-6.71494510E-03	-4.14866496E-01 -6.99781688E-03
5.75000E+02	1.77076377E+03	7.83030032E+06	2.00112554E+04	-6.10366835E-03	-5.82243098E-01 -6.38551701E-03
5.77000E+02	1.76958657E+03	7.87031602E+06	2.00044118E+04	-6.05302119E-03	-5.94963432E-01 -6.33477347E-03
6.00000E+02	1.75428633E+03	8.32942973E+06	1.99154259E+04	-5.45205022E-03	-7.33809432E-01 -5.73254918E-03

6.25000E+02	1.73423015E+03	8.82589811E+06	1.97987806E+04	-4.76028353E-03	-8.68533530E-01	-5.03913960E-03
6.50000E+02	1.71102712E+03	9.31921625E+06	1.96638388E+04	-4.02860302E-03	-9.85425638E-01	-4.30555849E-03
6.75000E+02	1.68513573E+03	9.80895974E+06	1.95132657E+04	-3.25728030E-03	-1.08347926E+00	-3.53211503E-03
7.00000E+02	1.65703934E+03	1.02947726E+07	1.93498713E+04	-2.44661847E-03	-1.16170205E+00	-2.71915187E-03
7.25000E+02	1.62724604E+03	1.07763710E+07	1.91766093E+04	-1.59694646E-03	-1.21911060E+00	-1.86703955E-03
7.50000E+02	1.59628837E+03	1.12535466E+07	1.89965755E+04	-7.08613079E-04	-1.25473105E+00	-9.76170481E-04
7.75000E+02	1.56471978E+03	1.17261703E+07	1.88130086E+04	1.87928254E-04	-1.26753798E+00	-5.32641642E-05
8.00000E+02	1.53311142E+03	1.21941953E+07	1.86292128E+04	1.02962382E-03	-1.25815700E+00	8.15494934E-04
8.25000E+02	1.50200650E+03	1.26576553E+07	1.84483293E+04	1.83652656E-03	-1.22771994E+00	1.62447680E-03
8.50000E+02	1.47191522E+03	1.31166610E+07	1.82733531E+04	2.63693397E-03	-1.17687899E+00	2.43612789E-03
8.75000E+02	1.44334717E+03	1.35270735E+07	9.70543850E+03	3.41030552E-03	-1.10543428E+00	3.31227078E-03
9.00000E+02	1.41684970E+03	1.35285290E+07	-8.78266041E+03	4.14479316E-03	-1.01088751E+00	4.22687410E-03
9.25000E+02	1.39298701E+03	1.31365672E+07	-2.21255065E+04	4.81381245E-03	-8.95155767E-01	4.99224396E-03
9.50000E+02	1.37224810E+03	1.24430761E+07	-3.30610472E+04	5.39620375E-03	-7.61872179E-01	5.66282510E-03
9.75000E+02	1.35504504E+03	1.14990534E+07	-4.21325889E+04	5.94120229E-03	-6.12452073E-01	6.28098124E-03
9.91000E+02	1.34607010E+03	1.07859064E+07	-4.68654187E+04	6.26553069E-03	-5.09019374E-01	6.64347761E-03
1.00000E+03	1.34176190E+03	1.03536805E+07	-4.91368277E+04	6.43851881E-03	-4.48360157E-01	6.83478355E-03
1.02500E+03	1.33274659E+03	9.06096490E+06	-5.38915922E+04	6.87963140E-03	-2.71342282E-01	7.30065947E-03
1.05000E+03	1.32829187E+03	7.67914410E+06	-5.62422442E+04	7.24695396E-03	-8.38381697E-02	7.68634649E-03
1.07500E+03	1.32863272E+03	6.26993619E+06	-5.60643644E+04	7.54832312E-03	1.11967247E-01	7.96671390E-03
1.10000E+03	1.33394830E+03	4.89778566E+06	-5.32641704E+04	7.78315997E-03	3.13889318E-01	8.17194953E-03
1.12500E+03	1.34434994E+03	3.62936792E+06	-4.76666002E+04	7.92503176E-03	5.18625240E-01	8.23975721E-03
1.13300E+03	1.34876294E+03	3.25795778E+06	-4.51354644E+04	7.95817816E-03	5.84625493E-01	8.25908125E-03
1.16000E+03	1.36757037E+03	2.18072765E+06	-3.50139803E+04	8.04304282E-03	8.08856896E-01	8.34751222E-03
1.19000E+03	1.39559912E+03	1.15292788E+06	-2.96754800E+04	8.09912781E-03	1.05946561E+00	8.32513312E-03
1.20600E+03	1.41361467E+03	7.11587276E+05	-2.57875018E+04	8.11571625E-03	1.19245222E+00	8.29991269E-03
1.21200E+03	1.42091749E+03	6.29288118E+05	-1.35455670E+04	8.12772104E-03	1.24182135E+00	8.24205800E-03
1.22500E+03	1.43776081E+03	4.58216489E+05	-1.27623035E+04	8.14900255E-03	1.34945888E+00	8.32669228E-03
1.24200E+03	1.46192353E+03	2.50645321E+05	-1.16388213E+04	8.16713604E-03	1.49419463E+00	8.81373723E-03
1.25000E+03	1.47415871E+03	1.59793362E+05	-1.10698029E+04	8.17210160E-03	1.56460037E+00	8.78709065E-03
1.26418E+03	1.49722560E+03	1.03328457E+04	-9.99701319E+03	8.17570804E-03	1.68881729E+00	8.73109766E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			2.32433861E+00		
1.26418E+03	1.49722560E+03	1.03328457E+04	-1.29037117E+03	8.17570804E-03	1.68881729E+00	8.24739533E-03
1.27500E+03	1.51597997E+03	1.04935251E+03	-4.18154471E+02	8.17586948E-03	1.77779535E+00	8.19910029E-03
1.28000E+03	1.52497130E+03	-7.69083492E-06	2.90613189E-07	8.17587482E-03	1.81873302E+00	8.17587482E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
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2.44618039E+01	5.98379848E+02	8.07512953E+00	1.93056344E+01	1.88006211E+01	0.
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STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	V/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	1.10287799E-02	7.69410833E-01	1.10287799E-02
1.16200E+03	1.55681526E+00	1.08496875E+04	5.42778870E+03	1.10287908E-02	7.91251406E-01	1.09202350E-02
1.16400E+03	3.16115853E+00	2.17077406E+04	5.43027576E+03	1.10288233E-02	8.13091855E-01	1.09202178E-02
1.16600E+03	4.80918268E+00	3.25708356E+04	5.43283054E+03	1.10288776E-02	8.34932291E-01	1.09202210E-02
1.16800E+03	6.50088771E+00	4.34391079E+04	5.43545303E+03	1.10289536E-02	8.56772753E-01	1.09202445E-02
1.17000E+03	8.23627374E+00	5.43126929E+04	5.43814324E+03	1.10290514E-02	8.78613283E-01	1.09202885E-02
1.18000E+03	1.75684277E+01	1.08765048E+05	5.45261001E+03	1.10298666E-02	9.87818372E-01	1.09208144E-02
1.19000E+03	2.79926673E+01	1.63370536E+05	5.46876973E+03	1.10312272E-02	1.09703128E+00	1.09218518E-02
1.20000E+03	3.95090964E+01	2.18146087E+05	5.48662258E+03	1.10331346E-02	1.20625712E+00	1.09234022E-02
1.20600E+03	4.69432672E+01	2.51100091E+05	5.49814708E+03	1.10345423E-02	1.27180097E+00	1.09245794E-02
1.21000E+03	5.21197498E+01	2.26090141E+05	-6.24826725E+03	1.10351786E-02	1.31644063E+00	1.11601439E-02
1.21200E+03	5.47749515E+01	2.13597711E+05	-6.24415114E+03	1.10354717E-02	1.33876113E+00	1.11603547E-02
1.22000E+03	6.58421798E+01	1.63712390E+05	-6.22699465E+03	1.10364778E-02	1.42804682E+00	1.11610177E-02
1.23000E+03	8.06807078E+01	1.01556015E+05	-6.20399186E+03	1.10373619E-02	1.53965949E+00	1.11614417E-02
1.24000E+03	9.66353762E+01	3.96383201E+04	-6.17925882E+03	1.10378324E-02	1.65127416E+00	1.11614176E-02
1.24200E+03	9.99602473E+01	-2.94501137E-05	-5.63079885E-07	1.10378679E-02	1.67359508E+00	1.10378679E-02

t/20,1

t=120

Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
4.77110396E+01	2.27634330E+03	3.31378005E+02	3.35789269E+02	7.28010952E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	2.83874837E-02	-6.82937638E+00	2.83874837E-02
-3.70000E+01	-8.52013384E+01	-2.64272792E+04	-2.60460244E+03	2.83283328E-02	-6.25478191E+00	2.90322794E-02
-2.50000E+01	-1.58086023E+02	-6.64736322E+04	-4.05538242E+03	2.80583335E-02	-5.89266546E+00	3.04438526E-02
0.	-2.95844306E+02	-2.02923978E+05	-6.79728277E+03	2.66456691E-02	-5.13071901E+00	2.98824704E-02
2.50000E+01	-4.14863209E+02	-4.03226384E+05	-9.16601682E+03	2.48219917E-02	-4.40060165E+00	2.74408536E-02
5.00000E+01	-5.16430645E+02	-6.58337553E+05	-1.11873474E+04	2.34279803E-02	-3.73171237E+00	2.59140575E-02
7.50000E+01	-6.01815939E+02	-9.59911088E+05	-1.28866838E+04	2.22405051E-02	-3.10497456E+00	2.45013268E-02
1.00000E+02	-6.71915779E+02	-1.30013450E+06	-1.42815779E+04	2.07574562E-02	-2.50687890E+00	2.32629962E-02
1.25000E+02	-7.27510192E+02	-1.67158100E+06	-1.53876304E+04	1.88054115E-02	-1.94615859E+00	2.15049958E-02
1.50000E+02	-7.69700061E+02	-2.06728943E+06	-1.62267438E+04	1.63479277E-02	-1.43623442E+00	1.91947249E-02
1.75000E+02	-8.00134711E+02	-2.48097529E+06	-1.68321551E+04	1.49950280E-02	-1.00256582E+00	1.66782436E-02
2.00000E+02	-8.20163157E+02	-2.90716959E+06	-1.72303779E+04	1.33919071E-02	-6.04581122E-01	1.51149449E-02
2.25000E+02	-8.30762723E+02	-3.34092866E+06	-1.74408630E+04	1.15326147E-02	-2.49110743E-01	1.32767010E-02
2.50000E+02	-8.33104950E+02	-3.77783937E+06	-1.74869769E+04	9.69748612E-03	5.16146273E-02	1.05722602E-02
2.75000E+02	-8.28733488E+02	-4.21417021E+06	-1.73995104E+04	8.38318057E-03	2.92822474E-01	8.84451059E-03
3.00000E+02	-8.18808223E+02	-4.64689611E+06	-1.72016214E+04	7.23410227E-03	4.97175936E-01	7.54436750E-03
3.25000E+02	-8.04156218E+02	-5.07346834E+06	-1.69097032E+04	6.19333868E-03	6.71510644E-01	6.42444861E-03
3.50000E+02	-7.85481990E+02	-5.49171477E+06	-1.65377582E+04	5.22993722E-03	8.19283765E-01	5.41188466E-03
3.75000E+02	-7.63514548E+02	-7.10116911E+06	-8.00088544E+03	4.10334883E-03	9.34103431E-01	4.02968857E-03
3.85000E+02	-7.53981388E+02	-7.02113233E+06	-8.00650885E+03	3.69231498E-03	9.72346919E-01	3.62305452E-03
4.00000E+02	-7.39016714E+02	-6.89857232E+06	-8.33760621E+03	3.15853869E-03	1.02256778E+00	3.09162371E-03
4.25000E+02	-7.12582647E+02	-6.68289969E+06	-8.92235331E+03	2.36235838E-03	1.08935485E+00	2.25903061E-03
4.50000E+02	-6.84735493E+02	-6.45219432E+06	-9.53834996E+03	1.55901560E-03	1.13562293E+00	1.42429314E-03
4.75000E+02	-6.55990237E+02	-6.20581692E+06	-1.01742438E+04	8.37493362E-04	1.16176687E+00	7.11496534E-04
5.00000E+02	-6.26785888E+02	-5.94339910E+06	-1.08202053E+04	3.29794170E-04	1.17293136E+00	2.10890815E-04
5.25000E+02	-5.97439579E+02	-5.66478142E+06	-1.14692651E+04	-3.16023935E-05	1.17358148E+00	-1.14007303E-04
5.50000E+02	-5.68178187E+02	-5.36995066E+06	-1.21164693E+04	-3.86497608E-04	1.16563496E+00	-5.57152105E-04
5.75000E+02	-5.39262520E+02	-5.05902178E+06	-1.27560573E+04	-8.07128158E-04	1.14628312E+00	-9.86790937E-04
5.77000E+02	-5.36971961E+02	-5.03345899E+06	-1.28067127E+04	-8.39684602E-04	1.14427624E+00	-1.02006084E-03
6.00000E+02	-5.10960998E+02	-4.73226131E+06	-1.33820361E+04	-1.20204314E-03	1.11651132E+00	-1.39052252E-03

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6.25000E+02	-4.83527682E+02	-4.39007999E+06	1.39888268E+04	-1.56998144E-03	1.07698406E+00	-1.76700717E-03
6.50000E+02	-4.57196883E+02	-4.03302334E+06	1.45712274E+04	-1.90972056E-03	1.02839883E+00	-2.11494912E-03
6.75000E+02	-4.32185982E+02	-3.66176206E+06	1.51244301E+04	-2.22008712E-03	9.71484824E-01	-2.43310726E-03
7.00000E+02	-4.08693752E+02	-3.27708192E+06	1.56440387E+04	-2.49996652E-03	9.07001491E-01	-2.72030509E-03
7.25000E+02	-3.86899620E+02	-2.87987328E+06	1.61260850E+04	-2.74831184E-03	8.35736787E-01	-2.97543979E-03
7.50000E+02	-3.66962977E+02	-2.47112020E+06	1.65670437E+04	-2.96415179E-03	7.58505229E-01	-3.19749044E-03
7.75000E+02	-3.49021278E+02	-2.05188917E+06	1.69638595E+04	-3.14114977E-03	6.76314632E-01	-3.35863515E-03
8.00000E+02	-3.33179112E+02	-1.62331428E+06	1.73142347E+04	-3.27073668E-03	5.90681374E-01	-3.46975087E-03
8.25000E+02	-3.19508261E+02	-1.18657762E+06	1.76165899E+04	-3.36200784E-03	5.02693022E-01	-3.56449738E-03
8.50000E+02	-3.08060678E+02	-7.42894811E+05	1.78697644E+04	-3.42203844E-03	4.12928105E-01	-3.61840948E-03
8.75000E+02	-2.98872473E+02	-2.41520879E+05	2.77914727E+04	-3.45190051E-03	3.21779063E-01	-3.73262246E-03
9.00000E+02	-2.92013096E+02	7.01069997E+05	4.60656811E+04	-3.44199799E-03	2.26475819E-01	-3.87251838E-03
9.25000E+02	-2.87563704E+02	1.98337692E+06	5.55568178E+04	-3.37690067E-03	1.29777338E-01	-3.82493953E-03
9.50000E+02	-2.85506820E+02	3.43371598E+06	5.96787319E+04	-3.25417512E-03	3.50551521E-02	-3.73545521E-03
9.75000E+02	-2.85777719E+02	4.92835547E+06	5.91305032E+04	-3.06407585E-03	-5.61181750E-02	-3.54093475E-03
9.91000E+02	-2.87119465E+02	5.85524978E+06	5.64357986E+04	-2.90711895E-03	-1.11398612E-01	-3.36224636E-03
1.00000E+03	-2.88255870E+02	6.35331354E+06	5.41556274E+04	-2.80720274E-03	-1.41135810E-01	-3.24394167E-03
1.02500E+03	-2.92754968E+02	7.60230665E+06	4.51253964E+04	-2.48965744E-03	-2.17520230E-01	-2.84219960E-03
1.05000E+03	-2.99029656E+02	8.57987096E+06	3.25322482E+04	-2.13363388E-03	-2.83037989E-01	-2.38779207E-03
1.07500E+03	-3.06793220E+02	9.20401977E+06	1.69543476E+04	-1.74832020E-03	-3.36350125E-01	-1.87484518E-03
1.10000E+03	-3.15726195E+02	9.40802249E+06	-9.70656431E+02	-1.35540195E-03	-3.76638974E-01	-1.34831687E-03
1.12500E+03	-3.25512768E+02	9.14041729E+06	-2.09577758E+04	-1.04567265E-03	-4.04784583E-01	-9.07295981E-04
1.13300E+03	-3.28777892E+02	8.94432908E+06	-2.80838156E+04	-9.58576685E-04	-4.11496435E-01	-7.71351248E-04
1.16000E+03	-3.40099472E+02	7.84014131E+06	-5.15965926E+04	-6.93180966E-04	-4.25223299E-01	-2.44514943E-04
1.19000E+03	-3.52934632E+02	6.21910351E+06	-6.17921005E+04	-4.51650324E-04	-4.29109308E-01	1.89517663E-05
1.20600E+03	-3.59791172E+02	5.18079181E+06	-6.74549721E+04	-3.49552375E-04	-4.27839292E-01	1.32268854E-04
1.21200E+03	-3.62351505E+02	4.65702396E+06	-8.75209841E+04	-2.61448476E-04	-4.25605049E-01	4.77308589E-04
1.22500E+03	-3.67819521E+02	3.51292846E+06	-8.84900018E+04	-1.01277619E-04	-4.15628099E-01	1.13076991E-03
1.24200E+03	-3.74575057E+02	1.99820659E+06	-8.96921744E+04	4.04283656E-05	-3.71376568E-01	5.02332695E-03
1.25000E+03	-3.77384191E+02	1.27864283E+06	-9.01892239E+04	8.01537182E-05	-3.30906884E-01	5.09066616E-03
1.26418E+03	-3.81560823E+02	-5.69605802E+03	-9.09283196E+04	1.07582892E-04	-2.58158418E-01	5.15915620E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			6.43155501E+00		
1.26418E+03	-3.81560823E+02	-5.69605802E+03	7.20754313E+02	1.07582892E-04	-2.58158418E-01	6.75409857E-05
1.27500E+03	-3.84349344E+02	-5.68233405E+02	2.27367947E+02	1.07494436E-04	-2.57279881E-01	9.48628831E-05
1.28000E+03	-3.85634479E+02	-8.78446570E-08	1.15566671E-09	1.07491551E-04	-2.56773988E-01	1.07491551E-04

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BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
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4.77110396E+01	2.27634330E+03	8.07512953E+00	3.66386536E+00	3.58072607E+00	0.
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STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
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1.16000E+03	0.	0.	0.			-4.46366887E-03	-3.61359526E-01	-4.46366887E-03
1.16200E+03	-7.29483796E-01	-1.77975649E+04	-8.90403741E+03	-4.46368666E-03	-3.69930925E-01	-4.28560591E-03		
1.16400E+03	-1.47791683E+00	-3.56100365E+04	-8.90845111E+03	-4.46374007E-03	-3.78502096E-01	-4.28557104E-03		
1.16600E+03	-2.24349215E+00	-5.34314367E+04	-8.91296591E+03	-4.46382911E-03	-3.87073231E-01	-4.28556979E-03		
1.16800E+03	-3.02620977E+00	-7.12619676E+04	-8.91758180E+03	-4.46395380E-03	-3.95644398E-01	-4.28560216E-03		
1.17000E+03	-3.82606982E+00	-8.91018313E+04	-8.92229879E+03	-4.46411416E-03	-4.04215662E-01	-4.28566818E-03		
1.18000E+03	-8.08252031E+00	-1.78448220E+05	-8.94740019E+03	-4.46545170E-03	-4.47075819E-01	-4.28650370E-03		
1.19000E+03	-1.27676283E+01	-2.68058261E+05	-8.97502950E+03	-4.46768400E-03	-4.89948550E-01	-4.28818341E-03		
1.20000E+03	-1.78815616E+01	-3.57957240E+05	-9.00518771E+03	-4.47081383E-03	-5.32842311E-01	-4.29071008E-03		
1.20600E+03	-2.11558595E+01	-4.12045838E+05	-9.02449710E+03	-4.47312378E-03	-5.58592189E-01	-4.29263384E-03		
1.21000E+03	-2.34276701E+01	-3.70705792E+05	1.03279673E+04	-4.47416744E-03	-5.77313610E-01	-4.68072678E-03		
1.21200E+03	-2.45916591E+01	-3.50056703E+05	1.03211029E+04	-4.47464794E-03	-5.86675411E-01	-4.68107000E-03		
1.22000E+03	-2.94348694E+01	-2.67600949E+05	1.02925412E+04	-4.47629493E-03	-6.24128591E-01	-4.68214575E-03		
1.23000E+03	-3.59102770E+01	-1.64864171E+05	1.02543541E+04	-4.47773627E-03	-6.70954053E-01	-4.68282335E-03		
1.24000E+03	-4.28539607E+01	-6.25230730E+04	1.02134053E+04	-4.47849400E-03	-7.17782595E-01	-4.68276210E-03		
1.24200E+03	-4.42988914E+01	-3.10447221E-08	1.67145330E-09	-4.47854966E-03	-7.27144957E-01	-4.47854966E-03		

t120,2

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Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
5.53828116E+01	3.06725582E+03	3.31378005E+02	3.12220220E+02	2.82053568E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	7.44916950E-02	-1.59906918E+01	7.44916950E-02
-3.70000E+01	-1.97846861E+02	-8.30858038E+04	-8.17345337E+03	7.43055586E-02	-1.44793399E+01	7.65146001E-02
-2.50000E+01	-3.65832279E+02	-2.08510609E+05	-1.26791616E+04	7.34577986E-02	-1.35182297E+01	8.09161289E-02
0.	-6.78372545E+02	-6.33103134E+05	-2.10612946E+04	6.90392792E-02	-1.14938287E+01	7.90684671E-02
2.50000E+01	-9.41301841E+02	-1.25047400E+06	-2.81121154E+04	6.33663507E-02	-9.57127229E+00	7.13983836E-02
5.00000E+01	-1.15867811E+03	-2.02855872E+06	-3.39410121E+04	5.90568137E-02	-7.84040253E+00	6.65992609E-02
7.50000E+01	-1.33446859E+03	-2.93823655E+06	-3.86550026E+04	5.54093936E-02	-6.24104867E+00	6.21909730E-02
1.00000E+02	-1.47147545E+03	-3.95263278E+06	-4.23279809E+04	5.08859934E-02	-4.73161070E+00	5.83119549E-02
1.25000E+02	-1.57213931E+03	-5.04650079E+06	-4.50257387E+04	4.49729032E-02	-3.33846865E+00	5.28721556E-02
1.50000E+02	-1.63986483E+03	-6.19654521E+06	-4.68395574E+04	3.75811310E-02	-2.10162796E+00	4.57985972E-02
1.75000E+02	-1.67963890E+03	-7.38226016E+06	-4.79048589E+04	3.35411401E-02	-1.09255749E+00	3.83316260E-02
2.00000E+02	-1.69550642E+03	-8.58643905E+06	-4.83287447E+04	2.87890756E-02	-1.91518439E-01	3.36219501E-02
2.25000E+02	-1.69041084E+03	-9.79400613E+06	-4.81901545E+04	2.33185320E-02	5.82080998E-01	2.81375474E-02
2.50000E+02	-1.66783862E+03	-1.09920273E+07	-4.75828144E+04	1.79574905E-02	1.19467428E+00	2.03377883E-02
2.75000E+02	-1.63225442E+03	-1.21702631E+07	-4.66267174E+04	1.41472786E-02	1.63691605E+00	1.53835378E-02
3.00000E+02	-1.58698055E+03	-1.33212069E+07	-4.54112074E+04	1.08408378E-02	1.97347293E+00	1.16599186E-02
3.25000E+02	-1.53438514E+03	-1.44391914E+07	-4.39995364E+04	7.86795012E-03	2.22426351E+00	8.46930482E-03
3.50000E+02	-1.47647546E+03	-1.55199986E+07	-4.24454600E+04	5.13565110E-03	2.39961148E+00	5.60263353E-03
3.75000E+02	-1.41534673E+03	-1.65960228E+07	5.39013194E+04	2.41270521E-03	2.48079334E+00	1.91646198E-03
3.85000E+02	-1.39046424E+03	-1.60569108E+07	5.39210962E+04	1.46224557E-03	2.49529411E+00	9.95800105E-04
4.00000E+02	-1.35298547E+03	-1.52397181E+07	5.50383765E+04	2.61419745E-04	2.50104845E+00	-1.80300773E-04
4.25000E+02	-1.29073558E+03	-1.38405216E+07	5.68937962E+04	-1.44461910E-03	2.47272562E+00	-2.10349341E-03
4.50000E+02	-1.22976178E+03	-1.23953462E+07	5.87111591E+04	-3.04895810E-03	2.39906847E+00	-3.87821176E-03
4.75000E+02	-1.17116005E+03	-1.09055562E+07	6.04578839E+04	-4.38053242E-03	2.28523051E+00	-5.12923687E-03
5.00000E+02	-1.11573190E+03	-9.37324466E+06	6.21098075E+04	-5.23051522E-03	2.14650042E+00	-5.91304058E-03
5.25000E+02	-1.06397417E+03	-7.80097993E+06	6.36522505E+04	-5.76715987E-03	1.99263849E+00	-6.22449152E-03
5.50000E+02	-1.01619695E+03	-6.19161532E+06	6.50761017E+04	-6.21132237E-03	1.82532036E+00	-7.12788719E-03
5.75000E+02	-9.72847960E+02	-4.54827805E+06	6.63680148E+04	-6.64459966E-03	1.64119964E+00	-7.57936043E-03
5.77000E+02	-9.69580750E+02	-4.41544451E+06	6.64653730E+04	-6.67351500E-03	1.62601049E+00	-7.60964701E-03
6.00000E+02	-9.34226478E+02	-2.87438991E+06	6.75189803E+04	-6.94409417E-03	1.44748384E+00	-7.89506572E-03

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6.25000E+02	-9.00531116E+02	-1.17355334E+06	6.85231223E+04	-7.10748640E-03	1.24759787E+00	-8.07260080E-03
6.50000E+02	-8.71871973E+02	5.50514356E+05	6.93771375E+04	-7.13275242E-03	1.04502257E+00	-8.10989520E-03
6.75000E+02	-8.48272245E+02	2.29404590E+06	7.00803340E+04	-7.01817055E-03	8.43286316E-01	-8.00521751E-03
7.00000E+02	-8.29666416E+02	4.05328968E+06	7.06346635E+04	-6.76232273E-03	6.45956491E-01	-7.75717714E-03
7.25000E+02	-8.15899393E+02	5.82457621E+06	7.10447472E+04	-6.36409057E-03	4.56631026E-01	-7.36472081E-03
7.50000E+02	-8.06725842E+02	7.60438509E+06	7.13178952E+04	-5.82264607E-03	2.78930055E-01	-6.82712346E-03
7.75000E+02	-8.01810527E+02	9.38941261E+06	7.14641809E+04	-5.16102217E-03	1.17038271E-01	-6.07722962E-03
8.00000E+02	-8.00702985E+02	1.11766489E+07	7.14969788E+04	-4.43798837E-03	-2.56288422E-02	-5.25979272E-03
8.25000E+02	-8.02898407E+02	1.29634411E+07	7.14312513E+04	-3.65421030E-03	-1.47560889E-01	-4.47525917E-03
8.50000E+02	-8.07880732E+02	1.47475192E+07	7.12825259E+04	-2.79388503E-03	-2.48049727E-01	-3.57720949E-03
8.75000E+02	-8.15084727E+02	1.64654360E+07	5.91544187E+04	-1.88823362E-03	-3.24347141E-01	-2.48575300E-03
9.00000E+02	-8.23830213E+02	1.75512021E+07	2.79587087E+04	-9.64380061E-04	-3.70434813E-01	-1.22567640E-03
9.25000E+02	-8.33346801E+02	1.79069487E+07	7.03407794E+02	-7.44500202E-05	-3.86351739E-01	-8.01226637E-05
9.50000E+02	-8.42910642E+02	1.75995778E+07	-2.51718146E+04	7.34968437E-04	-3.75587325E-01	9.37966941E-04
9.75000E+02	-8.51890930E+02	1.66615285E+07	-4.94690185E+04	1.51593237E-03	-3.39797253E-01	1.91487607E-03
9.91000E+02	-8.57049855E+02	1.57563231E+07	-6.34269274E+04	1.98800575E-03	-3.04430609E-01	2.49951323E-03
1.00000E+03	-8.59682166E+02	1.51530166E+07	-7.05443729E+04	2.24098763E-03	-2.80527363E-01	2.80989386E-03
1.02500E+03	-8.65723433E+02	1.31737700E+07	-8.68916639E+04	2.88548437E-03	-2.00308933E-01	3.56432550E-03
1.05000E+03	-8.69541819E+02	1.08585917E+07	-9.72297988E+04	3.4134537E-03	-1.03273150E-01	4.17306318E-03
1.07500E+03	-8.70767809E+02	8.37083831E+06	-1.00555386E+05	3.82930134E-03	6.42799764E-03	4.57971467E-03
1.10000E+03	-8.69141053E+02	5.89515798E+06	-9.61699250E+04	4.12934647E-03	1.24442751E-01	4.83131672E-03
1.12500E+03	-8.64531828E+02	3.63029986E+06	-8.34429438E+04	4.28775216E-03	2.44594076E-01	4.83869597E-03
1.13300E+03	-8.62420266E+02	2.98698279E+06	-7.72346420E+04	4.31958508E-03	2.83296366E-01	4.83448270E-03
1.16000E+03	-8.53007942E+02	1.25993525E+06	-5.13365194E+04	4.38470380E-03	4.13929859E-01	4.83110832E-03
1.19000E+03	-8.38330129E+02	-9.03258526E+05	-5.97450833E+04	4.38860906E-03	5.63378360E-01	4.84362129E-03
1.20600E+03	-8.28703569E+02	-1.76766328E+06	-4.90987114E+04	4.36448487E-03	6.39804524E-01	4.71518996E-03
1.21200E+03	-8.24790137E+02	-1.60961826E+06	2.68102831E+04	4.33423221E-03	6.64672881E-01	4.10792892E-03
1.22500E+03	-8.15810975E+02	-1.24734126E+06	2.89515869E+04	4.27814506E-03	7.16736640E-01	3.87505172E-03
1.24200E+03	-8.03119473E+02	-7.29752261E+05	3.19804923E+04	4.22711922E-03	7.73557893E-01	2.45042520E-03
1.25000E+03	-7.96854168E+02	-4.67957967E+05	3.34741882E+04	4.21257813E-03	7.92768338E-01	2.35290101E-03
1.26418E+03	-7.85383980E+02	2.59677595E+04	3.62090828E+04	4.20292860E-03	8.24968857E-01	2.19131289E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-2.05454086E+00		
1.26418E+03	-7.85383980E+02	2.59677595E+04	-3.24020030E+03	4.20292860E-03	8.24968857E-01	4.38293973E-03
1.27500E+03	-7.76204767E+02	2.63977663E+03	-1.05170654E+03	4.20333448E-03	8.71743427E-01	4.26176262E-03
1.28000E+03	-7.71793141E+02	-7.77929375E-08	-2.80657205E-10	4.20334791E-03	8.92906804E-01	4.20334791E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
5.53828116E+01	3.06725582E+03	8.07512953E+00	2.72329149E+01	2.50486567E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	2.28941651E-02	1.19065237E-01	2.28941651E-02
1.16200E+03	2.81886265E-01	7.18654144E+04	3.59352619E+04	2.28942370E-02	1.63416307E-01	2.21755317E-02
1.16400E+03	6.53070033E-01	1.43738770E+05	3.59382114E+04	2.28944526E-02	2.07767506E-01	2.21756883E-02
1.16600E+03	1.11295660E+00	2.15618730E+05	3.59418657E+04	2.28948119E-02	2.52119147E-01	2.21759746E-02
1.16800E+03	1.66154712E+00	2.87506703E+05	3.59462250E+04	2.28953150E-02	2.96471491E-01	2.21763905E-02
1.17000E+03	2.29884325E+00	3.59404100E+05	3.59512891E+04	2.28959620E-02	3.40824796E-01	2.21769362E-02
1.18000E+03	6.81600266E+00	7.19081777E+05	3.59871836E+04	2.29013541E-02	5.62614825E-01	2.21816104E-02
1.19000E+03	1.35513503E+01	1.07920653E+06	3.60407044E+04	2.29103451E-02	7.84467825E-01	2.21895310E-02
1.20000E+03	2.25056784E+01	1.43995464E+06	3.61118578E+04	2.29229403E-02	1.00641628E+00	2.22007031E-02
1.20600E+03	2.89438370E+01	1.65677609E+06	3.61630171E+04	2.29322303E-02	1.13964472E+00	2.22089700E-02
1.21000E+03	3.36919851E+01	1.50431216E+06	-3.80960177E+04	2.29364451E-02	1.23443148E+00	2.36983654E-02
1.21200E+03	3.62082460E+01	1.42813999E+06	-3.80760229E+04	2.29384000E-02	1.28182979E+00	2.36999205E-02
1.22000E+03	4.72213409E+01	1.12387382E+06	-3.79885100E+04	2.29452051E-02	1.47145061E+00	2.37049753E-02
1.23000E+03	6.31211698E+01	7.44604747E+05	-3.78621658E+04	2.29514327E-02	1.70852129E+00	2.37086760E-02
1.24000E+03	8.13918419E+01	3.66693306E+05	-3.77169823E+04	2.29551362E-02	1.94561446E+00	2.37094758E-02
1.24200E+03	8.53304895E+01	-6.40986541E-09	-5.78537411E-09	2.29554776E-02	1.99302191E+00	2.29554776E-02

t=120

Mode 4

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
7.14505486E+01	5.10518089E+03	3.31378005E+02	6.63646538E+01	6.41542414E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	2.30935171E-02	-4.08073598E+00	2.30935171E-02
-3.70000E+01	-4.96441407E+01	-3.50419264E+04	-3.43410678E+03	2.30148675E-02	-3.60979169E+00	2.39430044E-02
-2.50000E+01	-9.11302799E+01	-8.75278399E+04	-5.28632064E+03	2.26582679E-02	-3.30456484E+00	2.57678683E-02
0.	-1.65647262E+02	-2.62768381E+05	-8.61268065E+03	2.08145324E-02	-2.66076758E+00	2.49158089E-02
2.50000E+01	-2.24514187E+02	-5.12330632E+05	-1.12398890E+04	1.84748238E-02	-2.06148911E+00	2.16862207E-02
5.00000E+01	-2.69450225E+02	-8.19601803E+05	-1.32450965E+04	1.67211271E-02	-1.54233084E+00	1.96644819E-02
7.50000E+01	-3.02107279E+02	-1.17002260E+06	-1.47024834E+04	1.52576181E-02	-1.07771238E+00	1.78370011E-02
1.00000E+02	-3.23650558E+02	-1.55058616E+06	-1.56631734E+04	1.34703760E-02	-6.50803384E-01	1.62183011E-02
1.25000E+02	-3.35096173E+02	-1.94941721E+06	-1.61727820E+04	1.11691373E-02	-2.71745540E-01	1.40064675E-02
1.50000E+02	-3.37826921E+02	-2.35597548E+06	-1.62930296E+04	8.33696942E-03	4.45215057E-02	1.11953957E-02
1.75000E+02	-3.33773274E+02	-2.76156404E+06	-1.61111823E+04	6.81366611E-03	2.74966344E-01	8.42478434E-03
2.00000E+02	-3.24471320E+02	-3.15957882E+06	-1.56949098E+04	5.05090434E-03	4.63568584E-01	6.62039533E-03
2.25000E+02	-3.11048071E+02	-3.54477312E+06	-1.50945254E+04	3.05481624E-03	6.03887238E-01	4.56426878E-03
2.50000E+02	-2.94803924E+02	-3.91324943E+06	-1.43682473E+04	1.12925735E-03	6.85663063E-01	1.84801912E-03
2.75000E+02	-2.77303986E+02	-4.26273244E+06	-1.35860803E+04	-2.16490379E-04	7.09117240E-01	1.43730491E-04
3.00000E+02	-2.59688130E+02	-4.59251568E+06	-1.27989981E+04	-1.36560172E-03	6.96195780E-01	-1.13474650E-03
3.25000E+02	-2.42768991E+02	-4.90294406E+06	-1.20431325E+04	-2.38282547E-03	6.53975312E-01	-2.21822841E-03
3.50000E+02	-2.27228307E+02	-5.19518668E+06	-1.13488704E+04	-3.30400940E-03	5.86296890E-01	-3.17914981E-03
3.75000E+02	-2.13733352E+02	-1.96726683E+06	2.74647829E+04	-3.69841840E-03	4.91747697E-01	-3.95127330E-03
3.85000E+02	-2.09015598E+02	-1.69258736E+06	2.74710232E+04	-3.80500134E-03	4.51763009E-01	-4.04263995E-03
4.00000E+02	-2.02699544E+02	-1.27811497E+06	2.77843475E+04	-3.91941772E-03	3.90310204E-01	-4.14240606E-03
4.25000E+02	-1.94259294E+02	-5.77999297E+05	2.82029999E+04	-4.02912186E-03	2.84375025E-01	-4.35573448E-03
4.50000E+02	-1.88515408E+02	1.30919568E+05	2.84878847E+04	-4.05625087E-03	1.74671433E-01	-4.45862212E-03
4.75000E+02	-1.85532252E+02	8.45250496E+05	2.86357881E+04	-4.00296004E-03	6.43514106E-02	-4.35758281E-03
5.00000E+02	-1.85269699E+02	1.56158403E+06	2.86487461E+04	-3.90413334E-03	-4.28472078E-02	-4.21895473E-03
5.25000E+02	-1.87640240E+02	2.27659930E+06	2.85311117E+04	-3.78596377E-03	-1.46193767E-01	-3.99095543E-03
5.50000E+02	-1.92548978E+02	2.98709404E+06	2.82875464E+04	-3.61258745E-03	-2.47110222E-01	-4.01100360E-03
5.75000E+02	-1.99949503E+02	3.68994295E+06	2.79203243E+04	-3.34329038E-03	-3.44076066E-01	-3.73653438E-03
5.77000E+02	-2.00645104E+02	3.74574922E+06	2.78858242E+04	-3.31930424E-03	-3.51524725E-01	-3.71206233E-03
6.00000E+02	-2.09682317E+02	4.38214575E+06	2.74374263E+04	-3.01772178E-03	-4.33454356E-01	-3.40416440E-03

6.25000E+02	-2.21538288E+02	5.06093560E+06	2.68491525E+04	-2.63685351E-03	-5.13811016E-01	-3.01501059E-03
6.50000E+02	-2.35275021E+02	5.72382521E+06	2.61675622E+04	-2.20186959E-03	-5.83742904E-01	-2.57042680E-03
6.75000E+02	-2.50614751E+02	6.36865037E+06	2.54064327E+04	-1.71414186E-03	-6.41883432E-01	-2.07197894E-03
7.00000E+02	-2.67246065E+02	6.99361225E+06	2.45812105E+04	-1.17520227E-03	-6.86907516E-01	-1.52141650E-03
7.25000E+02	-2.84824984E+02	7.59731849E+06	2.37089570E+04	-5.86711710E-04	-7.17535777E-01	-9.20640681E-04
7.50000E+02	-3.02976156E+02	8.17882286E+06	2.28082899E+04	4.95743792E-05	-7.32537895E-01	-2.71669140E-04
7.75000E+02	-3.21296363E+02	8.73766344E+06	2.18993455E+04	7.09493277E-04	-7.30618162E-01	4.28732437E-04
8.00000E+02	-3.39354156E+02	9.27389934E+06	2.10034235E+04	1.34330526E-03	-7.11700256E-01	1.10188660E-03
8.25000E+02	-3.56729374E+02	9.78811654E+06	2.01412541E+04	1.96231854E-03	-6.76360064E-01	1.73080987E-03
8.50000E+02	-3.73022899E+02	1.02814098E+07	1.93328270E+04	2.58563044E-03	-6.24983842E-01	2.37318179E-03
8.75000E+02	-3.87823131E+02	1.05616622E+07	-1.79562831E+04	3.19398877E-03	-5.55597121E-01	3.37536537E-03
9.00000E+02	-4.00512568E+02	9.10894173E+06	-9.36403149E+04	3.73579821E-03	-4.54886857E-01	4.61094134E-03
9.25000E+02	-4.10351974E+02	6.14192636E+06	-1.40653299E+05	4.12493032E-03	-3.29976412E-01	5.25923112E-03
9.50000E+02	-4.16899342E+02	2.22501954E+06	-1.70121569E+05	4.31787968E-03	-1.92482031E-01	5.68982781E-03
9.75000E+02	-4.19911534E+02	-2.23124591E+06	-1.83673964E+05	4.31902159E-03	-4.81607538E-02	5.80026324E-03
9.91000E+02	-4.19943940E+02	-5.17998549E+06	-1.83814278E+05	4.21122724E-03	4.39756696E-02	5.69360045E-03
1.00000E+03	-4.19319870E+02	-6.82320792E+06	-1.81004296E+05	4.11298484E-03	9.47065653E-02	5.57269690E-03
1.02500E+03	-4.15266932E+02	-1.11513114E+07	-1.62750309E+05	3.70344881E-03	2.27676663E-01	4.97493563E-03
1.05000E+03	-4.08110158E+02	-1.48440399E+07	-1.30519377E+05	3.13042790E-03	3.42287267E-01	4.15011053E-03
1.07500E+03	-3.98376448E+02	-1.75804257E+07	-8.66960923E+04	2.42673331E-03	4.32793292E-01	3.07371907E-03
1.10000E+03	-3.86731362E+02	-1.91070021E+07	-3.42622998E+04	1.65092392E-03	4.95116007E-01	1.90101370E-03
1.12500E+03	-3.73885644E+02	-1.92463045E+07	2.45903454E+04	1.00958113E-03	5.29057016E-01	8.47219904E-04
1.13300E+03	-3.69631287E+02	-1.89664150E+07	4.54177900E+04	8.25516921E-04	5.34532236E-01	5.22731654E-04
1.16000E+03	-3.55174651E+02	-1.67412154E+07	1.12889779E+05	2.59776184E-04	5.31823855E-01	-7.21874066E-04
1.19000E+03	-3.40469370E+02	-6.17291270E+06	3.71790026E+05	-1.35855836E-04	4.46941355E-01	-2.96736928E-03
1.20600E+03	-3.33698397E+02	-1.12017867E+05	3.84393738E+05	-1.92467532E-04	3.99482366E-01	-2.93813709E-03
1.21200E+03	-3.31304732E+02	-1.23045839E+05	-1.36333026E+03	-1.94581086E-04	3.98406234E-01	-1.83073333E-04
1.22500E+03	-3.26141875E+02	-1.27438901E+05	6.85310901E+02	-1.99577842E-04	3.95879392E-01	-2.09119435E-04
1.24200E+03	-3.19448363E+02	-9.31657599E+04	3.34180059E+03	-2.05440457E-04	3.91248275E-01	-3.91096046E-04
1.25000E+03	-3.16332025E+02	-6.14775900E+04	4.57843714E+03	-2.07334815E-04	3.87836210E-01	-4.61692434E-04
1.26418E+03	-3.10884736E+02	1.88226818E+04	6.74046438E+03	-2.08362302E-04	3.80423709E-01	-5.82832545E-04
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-2.85446456E-01		
1.26418E+03	-3.10884736E+02	1.88226818E+04	-2.38195689E+03	-2.08362302E-04	3.80423709E-01	-7.60313632E-05
1.27500E+03	-3.06775644E+02	1.87727534E+03	-7.51219624E+02	-2.08070009E-04	3.79112725E-01	-1.66335585E-04
1.28000E+03	-3.04882420E+02	7.46441662E-06	-6.69130059E-08	-2.08060478E-04	3.78176703E-01	-2.08060478E-04

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.14505486E+01	5.10518089E+03	8.07512953E+00	2.73088481E+02	2.30326233E+02	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-1.01231762E-01	2.30226690E+00	-1.01231762E-01
1.16200E+03	4.39835332E+00	-3.89621510E+05	-1.94737883E+05	-1.01232152E-01	2.10759555E+00	-9.73373942E-02		
1.16400E+03	8.41886814E+00	-7.79043242E+05	-1.94684708E+05	-1.01233321E-01	1.91291864E+00	-9.73396264E-02		
1.16600E+03	1.20500242E+01	-1.16836377E+06	-1.94636683E+05	-1.01235268E-01	1.71823659E+00	-9.73425343E-02		
1.16800E+03	1.52918099E+01	-1.55759341E+06	-1.94593807E+05	-1.01237994E-01	1.52354805E+00	-9.73461178E-02		
1.17000E+03	1.81442108E+01	-1.94674244E+06	-1.94556082E+05	-1.01241498E-01	1.32885167E+00	-9.73503766E-02		
1.18000E+03	2.65647536E+01	-3.89163910E+06	-1.94444713E+05	-1.01270691E-01	3.55274863E-01	-9.73817968E-02		
1.19000E+03	2.52469752E+01	-5.83606602E+06	-1.94462142E+05	-1.01319329E-01	-6.18840498E-01	-9.74300866E-02		
1.20000E+03	1.41860466E+01	-7.78131147E+06	-1.94608432E+05	-1.01387415E-01	-1.59345310E+00	-9.74952465E-02		
1.20600E+03	2.87013694E+00	-8.94938783E+06	-1.94758094E+05	-1.01437607E-01	-2.17856314E+00	-9.75424449E-02		
1.21000E+03	-6.68604021E+00	-8.19047355E+06	1.89660818E+05	-1.01460460E-01	-2.59953823E+00	-1.05253676E-01		
1.21200E+03	-1.20956307E+01	-7.81122253E+06	1.89589271E+05	-1.01471128E-01	-2.81005492E+00	-1.05262913E-01		
1.22000E+03	-3.79448396E+01	-6.29581647E+06	1.89247393E+05	-1.01508745E-01	-3.65228792E+00	-1.05293693E-01		
1.23000E+03	-7.97328792E+01	-4.40598988E+06	1.88694711E+05	-1.01544415E-01	-4.70536075E+00	-1.05318309E-01		
1.24000E+03	-1.32052621E+02	-2.52238656E+06	1.88002737E+05	-1.01567576E-01	-5.75860288E+00	-1.05327560E-01		
1.24200E+03	-1.43780481E+02	6.60866142E-06	-4.22970958E-06	-1.01569902E-01	-5.96920153E+00	-1.01569902E-01		

t=120

Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
1.06483802E+02	1.13388001E+04	3.31378005E+02	3.33887832E+02	1.30032362E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.700000E+01	0.	0.	0.	-8.79098596E-02	1.12960292E+01	-8.79098596E-02
-3.700000E+01	1.32386528E+02	2.12166835E+05	2.06173113E+04	-8.74317183E-02	9.48291094E+00	-9.30039646E-02
-2.500000E+01	2.38850510E+02	5.24384103E+05	3.11770091E+04	-8.52853771E-02	8.26109614E+00	-1.03624794E-01
0.	4.12860076E+02	1.53283077E+06	4.84290075E+04	-7.43920344E-02	5.68717748E+00	-9.74534665E-02
2.500000E+01	5.25541904E+02	2.89503455E+06	5.95930447E+04	-6.09519126E-02	3.40451047E+00	-7.79784958E-02
5.000000E+01	5.87405648E+02	4.47076916E+06	6.57172173E+04	-5.12097477E-02	1.59634424E+00	-6.58135737E-02
7.500000E+01	6.08135191E+02	6.14698964E+06	6.77677327E+04	-4.33669911E-02	1.04290580E+01	-5.52560670E-02
1.000000E+02	5.94509360E+02	7.83070114E+06	6.64046174E+04	-3.41673978E-02	-1.16489465E+00	-4.58173207E-02
1.250000E+02	5.52422648E+02	9.44362691E+06	6.22163548E+04	-2.27911953E-02	-2.16426935E+00	-3.37063452E-02
1.500000E+02	4.89426940E+02	1.09241723E+07	5.59519910E+04	-9.37412928E-03	-2.83014020E+00	-1.91902690E-02
1.750000E+02	4.14869805E+02	1.22319010E+07	4.85503523E+04	-2.47325605E-03	-3.11062725E+00	-7.32829128E-03
2.000000E+02	3.35782674E+02	1.33479243E+07	4.06985935E+04	5.14953068E-03	-3.19160122E+00	1.07967133E-03
2.250000E+02	2.57409516E+02	1.42674025E+07	3.29168273E+04	1.33780351E-02	-3.05165344E+00	1.00863523E-02
2.500000E+02	1.85374655E+02	1.49989942E+07	2.57650759E+04	2.09559359E-02	-2.67740686E+00	1.96670556E-02
2.750000E+02	1.25325803E+02	1.55656683E+07	1.98040865E+04	2.59943345E-02	-2.10868934E+00	2.54692496E-02
3.000000E+02	8.11043814E+01	1.60023164E+07	1.54141961E+04	3.00950236E-02	-1.41557352E+00	2.98169981E-02
3.250000E+02	5.54684488E+01	1.63517559E+07	1.28679226E+04	3.35632232E-02	-6.24235569E-01	3.33873535E-02
3.500000E+02	5.06659517E+01	1.66629401E+07	1.23877834E+04	3.65757043E-02	2.49502486E-01	3.64394147E-02
3.750000E+02	6.74907461E+01	-4.48546405E+07	5.58546871E+04	2.99713425E-02	1.07294680E+00	2.94571155E-02
3.850000E+02	7.96340451E+01	-4.42959219E+07	5.58904042E+04	2.73765754E-02	1.35456814E+00	2.68930944E-02
4.000000E+02	1.02870734E+02	-4.34391695E+07	5.84473184E+04	2.40120661E-02	1.73195838E+00	2.35429865E-02
4.250000E+02	1.52848066E+02	-4.19120024E+07	6.39655375E+04	1.90079035E-02	2.25411949E+00	1.82671329E-02
4.500000E+02	2.14326784E+02	-4.02304021E+07	7.07428990E+04	1.39834432E-02	2.64639086E+00	1.29842573E-02
4.750000E+02	2.83977517E+02	-3.83673643E+07	7.84217137E+04	9.50134247E-03	2.91180660E+00	8.53017573E-03
5.000000E+02	3.59052297E+02	-3.63043879E+07	8.66952708E+04	6.37915508E-03	3.03397076E+00	5.42645980E-03
5.250000E+02	4.37585347E+02	-3.40294558E+07	9.53484817E+04	4.18788958E-03	3.19144099E+00	3.50282538E-03
5.500000E+02	5.18185009E+02	-3.15350332E+07	1.04229996E+05	2.08210322E-03	3.24505879E+00	6.14075104E-04
5.750000E+02	5.99196990E+02	-2.88175879E+07	1.13157749E+05	-3.52970460E-04	3.22794251E+00	-1.94674157E-03
5.770000E+02	6.05648786E+02	-2.85905615E+07	1.13868465E+05	-5.38158803E-04	3.22335358E+00	-2.14193999E-03
6.000000E+02	6.79012518E+02	-2.58782565E+07	1.21952791E+05	-2.55992602E-03	3.14963842E+00	-4.27757097E-03

6.25000E+02	7.56165627E+02	-2.27223957E+07	1.30454766E+05	-4.52105840E-03	3.01614714E+00	-6.35844947E-03
6.50000E+02	8.29362269E+02	-1.93591590E+07	1.38520519E+05	-6.21925062E-03	2.83395866E+00	-8.17024385E-03
6.75000E+02	8.97471249E+02	-1.58010496E+07	1.46025415E+05	-7.63826203E-03	2.61002771E+00	-9.69495802E-03
7.00000E+02	9.59540706E+02	-1.20634424E+07	1.52864576E+05	-8.76297944E-03	2.35174184E+00	-1.09160016E-02
7.25000E+02	1.01431847E+03	-8.16407511E+06	1.58954021E+05	-9.57962833E-03	2.06688341E+00	-1.18184174E-02
7.50000E+02	1.06271138E+03	-4.12251304E+06	1.64231696E+05	-1.00759420E-02	1.76358631E+00	-1.23890645E-02
7.75000E+02	1.10289927E+03	4.04123235E+04	1.68658953E+05	-1.02398710E-02	1.45178270E+00	-1.24021653E-02
8.00000E+02	1.13532368E+03	4.30330559E+06	1.72230656E+05	-1.00893831E-02	1.14333591E+00	-1.20690458E-02
8.25000E+02	1.16517340E+03	8.64498928E+06	1.74967468E+05	-9.66935414E-03	8.45859911E-01	-1.16804745E-02
8.50000E+02	1.17775882E+03	1.30450014E+07	1.76903900E+05	-8.99673129E-03	5.63388429E-01	-1.09407302E-02
8.75000E+02	1.18853027E+03	1.77619742E+07	2.28478161E+05	-8.11130745E-03	3.00552187E-01	-1.04191677E-02
9.00000E+02	1.19284489E+03	2.43895111E+07	2.86604356E+05	-6.98006329E-03	4.77991385E-02	-9.65860867E-03
9.25000E+02	1.19118744E+03	3.14540042E+07	2.69392965E+05	-5.58663108E-03	-1.72271883E-01	-7.75915500E-03
9.50000E+02	1.18468578E+03	3.74617137E+07	2.04183719E+05	-4.01417603E-03	-3.41301082E-01	-5.66081892E-03
9.75000E+02	1.17467982E+03	4.13699674E+07	1.03906728E+05	-2.21303466E-03	-4.51030040E-01	-3.05099214E-03
9.91000E+02	1.16717287E+03	4.24381371E+07	2.87029053E+04	-9.91094788E-04	-4.85318617E-01	-1.22256983E-03
1.00000E+03	1.16277674E+03	4.24989879E+07	-1.52744093E+04	-2.95615813E-04	-4.91600280E-01	-1.72435093E-04
1.02500E+03	1.15076997E+03	4.05972426E+07	-1.35536427E+05	1.60174746E-03	-4.59759027E-01	2.66062579E-03
1.05000E+03	1.14041096E+03	3.58601041E+07	-2.39328035E+05	3.28794136E-03	-3.61195498E-01	5.15769164E-03
1.07500E+03	1.13322542E+03	2.88972722E+07	-3.11311669E+05	4.69363180E-03	-2.07828591E-01	7.01685321E-03
1.10000E+03	1.13038598E+03	2.06578823E+07	-3.39836712E+05	5.73966309E-03	-1.57531939E-02	8.22022303E-03
1.12500E+03	1.13253974E+03	1.23250266E+07	-3.17637546E+05	6.28988232E-03	1.89573849E-01	8.38712902E-03
1.13300E+03	1.13432486E+03	9.85764662E+06	-2.98235222E+05	6.39661392E-03	2.56707998E-01	8.38484873E-03
1.16000E+03	1.14431597E+03	3.13154740E+06	-1.97794101E+05	6.59437352E-03	4.83198887E-01	8.31432223E-03
1.19000E+03	1.16208903E+03	1.27309070E+06	-6.23345925E+03	6.65927124E-03	6.97605556E-01	6.70674461E-03
1.20600E+03	1.17408862E+03	1.59410543E+06	4.28056826E+04	6.68373156E-03	8.02006312E-01	6.37797668E-03
1.21200E+03	1.17902774E+03	1.31259490E+06	-4.47235158E+04	6.70972273E-03	8.44369719E-01	7.08723006E-03
1.22500E+03	1.19060901E+03	7.96363813E+05	-3.45192685E+04	6.75062289E-03	9.37364098E-01	7.23123514E-03
1.24200E+03	1.20761739E+03	3.34188050E+05	-1.95372006E+04	6.77858155E-03	1.06499123E+00	7.86398159E-03
1.25000E+03	1.21638227E+03	2.08507015E+05	-1.18111257E+04	6.78503448E-03	1.12622999E+00	7.44120813E-03
1.26418E+03	1.23306241E+03	1.43841716E+05	2.89830927E+03	6.79187107E-03	1.22608598E+00	6.63085389E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-2.93245764E-01		
1.26418E+03	1.23306241E+03	1.43841716E+05	-1.79165356E+04	6.79187107E-03	1.22608598E+00	7.78723417E-03
1.27500E+03	1.24676515E+03	1.46515893E+04	-5.83520049E+03	6.79412118E-03	1.30676724E+00	7.11829898E-03
1.28000E+03	1.25338595E+03	-2.70782077E-01	-1.22700025E-03	6.79419574E-03	1.34155211E+00	6.79419581E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.06483802E+02	1.13388011E+04	8.07512953E+00	5.56530277E+00	3.83866753E+00	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PRIME 1/IN
1.16000E+03	1.	0.	0.			-2.03140924E-02	1.07660805E+00	-2.03140924E-02	
1.16200E+03	2.10932232E+01	-1.05765064E+05	-5.28058090E+04	-2.03141983E-02	1.03809510E+00	-1.92580821E-02			
1.16400E+03	4.14699531E+01	-2.11316448E+05	-5.27459521E+04	-2.03145154E-02	9.99577447E-01	-1.92595964E-02			
1.16600E+03	6.10762983E+01	-3.16750381E+05	-5.26883582E+04	-2.03150435E-02	9.61056602E-01	-1.92612763E-02			
1.16800E+03	7.99121919E+01	-4.22071389E+05	-5.26330275E+04	-2.03157823E-02	9.22532232E-01	-1.92631218E-02			
1.17000E+03	9.79775000E+01	-5.27284000E+05	-5.25799603E+04	-2.03167317E-02	8.84004005E-01	-1.92651325E-02			
1.18000E+03	1.70743471E+02	-1.05187955E+06	-5.23485843E+04	-2.03246294E-02	6.91293482E-01	-1.92776578E-02			
1.19000E+03	2.36231381E+02	-1.57444445E+06	-5.21738378E+04	-2.03377625E-02	4.98437175E-01	-1.92942858E-02			
1.20000E+03	2.75424662E+02	-2.09554523E+06	-5.20557695E+04	-2.03561134E-02	3.05394153E-01	-1.93149981E-02			
1.20600E+03	2.91270762E+02	-2.40773880E+06	-5.20121589E+04	-2.03696234E-02	1.89461750E-01	-1.93293803E-02			
1.21000E+03	2.97155023E+02	-2.24655619E+06	4.03039870E+04	-2.03758292E-02	1.04747050E-01	-2.11819089E-02			
1.21200E+03	2.98826304E+02	-2.16594289E+06	4.03088964E+04	-2.03787708E-02	6.23801656E-02	-2.11849488E-02			
1.22000E+03	2.97036332E+02	-1.84346619E+06	4.03036384E+04	-2.03894626E-02	-1.07143449E-01	-2.11955354E-02			
1.23000E+03	2.75722434E+02	-1.44069096E+06	4.02410286E+04	-2.04004094E-02	-3.19150551E-01	-2.12052300E-02			
1.24000E+03	2.33203636E+02	-1.03885326E+06	4.01161290E+04	-2.04086739E-02	-5.31234954E-01	-2.12109965E-02			
1.24200E+03	2.22154713E+02	-1.96179500E+06	-3.45611730E-04	-2.04096858E-02	-5.73645524E-01	-2.04096858E-02			

\$ASQ 1
135 SECOND BURN
N=5,WDSQ=1.,DWDS=10.,
H=0.,CODEI=1,CODEII=1,
P=0,ACC=0.,BEAM=2.,
OUTST=-57.,-37.,-25.,.,,
25.,50.,75.,100.,125.,150.,175.,
200.,225.,250.,275.,300.,325.,
350.,375.,385.,400.,425.,450.,
475.,500.,525.,550.,575.,577.,
600.,625.,650.,675.,700.,725.,
750.,775.,800.,825.,850.,875.,900.,
925.,950.,975.,991.,1000.,1025.,
1050.,1075.,1100.,1125.,1133.,1160.,1190.,

2120/5 241

TRW SYSTEMS

t=135

Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
2.81424734E+01	7.91998809E+02	2.70137073E+02	2.58794024E+02	1.98895420E+02	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/TN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	2.09052678E-02	-7.57315769E+00	2.09052678E-02
-3.70000E+01	-9.66344206E+01	-1.02949486E+04	-1.01978164E+03	2.08822823E-02	-7.15238534E+00	2.11578989E-02
-2.50000E+01	-1.80907128E+02	-2.60554489E+04	-1.60337780E+03	2.07767325E-02	-6.89306594E+00	2.17198959E-02
0.	-3.46425247E+02	-8.06638012E+04	-2.74957814E+03	2.02188433E-02	-6.34935276E+00	2.15281663E-02
2.50000E+01	-4.98462337E+02	-1.62755965E+05	-3.80239853E+03	1.94884359E-02	-5.81746211E+00	2.05748355E-02
5.00000E+01	-6.37517265E+02	-2.70035571E+05	-4.76531007E+03	1.89213126E-02	-5.30968498E+00	1.99802703E-02
7.50000E+01	-7.64091896E+02	-4.00301414E+05	-5.64180732E+03	1.84303599E-02	-4.81863862E+00	1.94201507E-02
1.00000E+02	-8.78540349E+02	-5.51425895E+05	-6.43430310E+03	1.78063959E-02	-4.33875178E+00	1.89352210E-02
1.25000E+02	-9.81169030E+02	-7.21334015E+05	-7.14492803E+03	1.69710017E-02	-3.87376005E+00	1.82244979E-02
1.50000E+02	-1.07242363E+03	-9.08015415E+05	-7.77676639E+03	1.59007932E-02	-3.42959970E+00	1.72651382E-02
1.75000E+02	-1.15301209E+03	-1.10955780E+06	-8.33478082E+03	1.53010169E-02	-3.01917289E+00	1.61344950E-02
2.00000E+02	-1.22352504E+03	-1.32417275E+06	-8.82301179E+03	1.45772978E-02	-2.62396630E+00	1.54591990E-02
2.25000E+02	-1.28438475E+03	-1.55015104E+06	-9.24438280E+03	1.37223668E-02	-2.24734241E+00	1.4644050E-02
2.50000E+02	-1.33611279E+03	-1.78586418E+06	-9.60251049E+03	1.28634906E-02	-1.89583985E+00	1.3363497E-02
2.75000E+02	-1.37944791E+03	-2.02979327E+06	-9.90252181E+03	1.22364925E-02	-1.57354927E+00	1.24990476E-02
3.00000E+02	-1.41495864E+03	-2.28053914E+06	-1.01483700E+04	1.16779094E-02	-1.26928368E+00	1.18609553E-02
3.25000E+02	-1.44305113E+03	-2.53678385E+06	-1.03428553E+04	1.11624074E-02	-9.79843688E-01	1.13037662E-02
3.50000E+02	-1.46407585E+03	-2.79727414E+06	-1.04884016E+04	1.06762515E-02	-7.03724411E-01	1.07916443E-02
3.75000E+02	-1.47835324E+03	-4.50398815E+06	-1.76290751E+04	1.00091347E-02	-4.40707856E-01	1.01714370E-02
3.85000E+02	-1.48225807E+03	-4.68028308E+06	-1.76298760E+04	9.74187922E-03	-3.40383010E-01	9.89438680E-03
4.00000E+02	-1.48627049E+03	-4.94498347E+06	-1.76607097E+04	9.37323436E-03	-1.94877704E-01	9.51497360E-03
4.25000E+02	-1.48823322E+03	-5.38678190E+06	-1.76757668E+04	8.76840550E-03	3.58696167E-02	8.97310460E-03
4.50000E+02	-1.48461012E+03	-5.82841353E+06	-1.76478400E+04	8.08235213E-03	2.51940328E-01	8.33161540E-03
4.75000E+02	-1.47579633E+03	-6.26884067E+06	-1.75799556E+04	7.39504639E-03	4.50863306E-01	7.61275481E-03
5.00000E+02	-1.46221454E+03	-6.70710600E+06	-1.74754091E+04	6.85451584E-03	6.33774726E-01	7.04655330E-03
5.25000E+02	-1.44422326E+03	-7.14232865E+06	-1.73369476E+04	6.42467263E-03	8.03925896E-01	6.54923594E-03
5.50000E+02	-1.42210842E+03	-7.57368926E+06	-1.71667451E+04	5.94750899E-03	9.64391525E-01	6.18929413E-03
5.75000E+02	-1.39613760E+03	-8.00041813E+06	-1.69668541E+04	5.31948720E-03	1.11131094E+00	5.55845697E-03
5.77000E+02	-1.39390392E+03	-8.03433468E+06	-1.69496673E+04	5.26776217E-03	1.12237592E+00	5.50648988E-03
6.00000E+02	-1.36669352E+03	-8.42180927E+06	-1.67402467E+04	4.65726253E-03	1.24202620E+00	4.89304065E-03

TRW SYSTEMS

6.25000E+02	-1.33419500E+03	-8.83723444E+06	-1.64901227E+04	3.96129132E-03	1.35567898E+00	4.19354657E-03
6.50000E+02	-1.29907770E+03	-9.24614742E+06	-1.62198457E+04	3.23207728E-03	1.45142412E+00	3.46052581E-03
6.75000E+02	-1.26179972E+03	-9.64808811E+06	-1.59329404E+04	2.47016474E-03	1.52843082E+00	2.69457235E-03
7.00000E+02	-1.22283975E+03	-1.00426865E+07	-1.56330901E+04	1.67613150E-03	1.58588354E+00	1.89631587E-03
7.25000E+02	-1.18269664E+03	-1.04296667E+07	-1.53241332E+04	8.50581475E-04	1.62298289E+00	1.06641434E-03
7.50000E+02	-1.14188905E+03	-1.08088505E+07	-1.50100604E+04	-5.86312089E-06	1.63894620E+00	2.05546180E-04
7.75000E+02	-1.10095169E+03	-1.11801615E+07	-1.46950130E+04	-8.63850736E-04	1.63297785E+00	-6.75453134E-04
8.00000E+02	-1.06043055E+03	-1.15436280E+07	-1.43831714E+04	-1.66349760E-03	1.60589784E+00	-1.49817379E-03
8.25000E+02	-1.02084043E+03	-1.18993798E+07	-1.40784760E+04	-2.42467544E-03	1.55893291E+00	-2.26285388E-03
8.50000E+02	-9.82662287E+02	-1.22476425E+07	-1.37846636E+04	-3.17457870E-03	1.49278494E+00	-3.02309888E-03
8.75000E+02	-9.46373034E+02	-1.25887341E+07	-1.35053927E+04	-3.89467255E-03	1.40784078E+00	-3.75825444E-03
9.00000E+02	-9.12432568E+02	-1.29216658E+07	-1.31059345E+04	-4.58510938E-03	1.30493056E+00	-4.46262401E-03
9.25000E+02	-8.81281789E+02	-1.32395044E+07	-9.92774480E+03	-5.23964858E-03	1.18471275E+00	-5.15958613E-03
9.50000E+02	-8.53366132E+02	-1.32391464E+07	9.55366303E+03	-5.84328125E-03	1.04617315E+00	-5.92032692E-03
9.75000E+02	-8.29148629E+02	-1.27833267E+07	2.64548994E+04	-6.43630189E-03	8.88959160E-01	-6.64964785E-03
9.91000E+02	-8.15801019E+02	-1.22838892E+07	3.57702647E+04	-6.80127718E-03	7.79011450E-01	-7.08974706E-03
1.00000E+03	-8.09081861E+02	-1.19405531E+07	4.04587649E+04	-6.99953469E-03	7.14134747E-01	-7.32581506E-03
1.02500E+03	-7.93590162E+02	-1.07869938E+07	5.12711112E+04	-7.51640421E-03	5.23277885E-01	-7.91695977E-03
1.05000E+03	-7.83043408E+02	-9.40576176E+06	5.86333331E+04	-7.95990071E-03	3.18906905E-01	-8.41797363E-03
1.07500E+03	-7.77748270E+02	-7.88588822E+06	6.23304449E+04	-8.3380739E-03	1.03518192E-01	-8.79895996E-03
1.10000E+03	-7.77947087E+02	-6.32119351E+06	6.21944884E+04	-8.63282494E-03	-1.20287287E-01	-9.08679930E-03
1.12500E+03	-7.83798892E+02	-4.80929912E+06	5.80132378E+04	-8.81816259E-03	-3.48423656E-01	-9.20120318E-03
1.13300E+03	-7.86881261E+02	-4.35425430E+06	5.56733267E+04	-8.86226889E-03	-4.22168549E-01	-9.23342440E-03
1.16000E+03	-8.01664278E+02	-2.99346800E+06	4.52141282E+04	-8.97712590E-03	-6.73387658E-01	-9.37029223E-03
1.19000E+03	-8.26096527E+02	-1.62434200E+06	4.03020452E+04	-9.05501525E-03	-9.55156058E-01	-9.36195135E-03
1.20600E+03	-8.42575625E+02	-1.01980794E+06	3.56009878E+04	-9.07855900E-03	-1.10470047E+00	-9.33285177E-03
1.21200E+03	-8.49370106E+02	-9.03456984E+05	1.91810088E+04	-9.09577852E-03	-1.16012666E+00	-9.25768376E-03
1.22500E+03	-8.65238630E+02	-6.60347334E+05	1.82043387E+04	-9.12638717E-03	-1.28118469E+00	-9.37984643E-03
1.24200E+03	-8.88401192E+02	-3.62746449E+05	1.67790312E+04	-9.15257338E-03	-1.44524023E+00	-1.00847418E-02
1.25000E+03	-9.00285304E+02	-2.31413876E+05	1.60475018E+04	-9.15976313E-03	-1.52578795E+00	-1.00512910E-02
1.26418E+03	-9.22928203E+02	-1.35960746E+04	1.46536717E+04	-9.16496467E-03	-1.66782232E+00	-9.97905754E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -2.61369677E+00					
1.26418E+03	-9.22928203E+02	-1.35960746E+04	1.69519176E+03	-9.16496467E-03	-1.66782232E+00	-9.25914199E-03
1.27500E+03	-9.41514201E+02	-1.38364995E+03	5.51105402E+02	-9.16517725E-03	-1.76766721E+00	-9.19579422E-03
1.28000E+03	-9.50467294E+02	3.54153404E-14	-7.21476272E-16	-9.16518429E-03	-1.81356999E+00	-9.16518429E-03

TRW SYSTEMS

BEAM 2

OMEGA OMEGA SQUARED TOTAL MASS GENERALIZED MASS INTG. PHI SQ DM ACCELERATION

2.81424734E+01 7.91998809E+02 8.07512953E+00 1.94181784E+01 1.87114022E+01 0.

STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-1.30455198E-02	-6.17992533E-01	-1.30455198E-02
1.16200E+03	-1.25869094E+00	-1.47647612E+04	-7.38552275E+03	-1.30455346E-02	-6.43788287E-01	-1.28978241E-02
1.16400E+03	-2.57206315E+00	-2.95384838E+04	-7.38821754E+03	-1.30455789E-02	-6.69583921E-01	-1.28978145E-02
1.16600E+03	-3.93702663E+00	-4.43177019E+04	-7.39101818E+03	-1.30456527E-02	-6.95379563E-01	-1.28978324E-02
1.16800E+03	-5.35358145E+00	-5.91026271E+04	-7.39392468E+03	-1.30457561E-02	-7.21175269E-01	-1.28978776E-02
1.17000E+03	-6.82172779E+00	-7.38934712E+04	-7.39693704E+03	-1.30458891E-02	-7.46971092E-01	-1.28979504E-02
1.18000E+03	-1.49363463E+01	-1.47943885E+05	-7.41358670E+03	-1.30469982E-02	-8.75953903E-01	-1.28987264E-02
1.19000E+03	-2.43408433E+01	-2.22174027E+05	-7.43288294E+03	-1.30488486E-02	-1.00494792E+00	-1.29001910E-02
1.20000E+03	-3.50353652E+01	-2.96610366E+05	-7.45482608E+03	-1.30514424E-02	-1.13396002E+00	-1.29023458E-02
1.20600E+03	-4.20713770E+01	-3.41382156E+05	-7.46926264E+03	-1.30533563E-02	-1.21137885E+00	-1.29039710E-02
1.21000E+03	-4.70226566E+01	-3.08017118E+05	8.33591067E+03	-1.30542221E-02	-1.26426134E+00	-1.32209404E-02
1.21200E+03	-4.95776213E+01	-2.91350521E+05	8.33066837E+03	-1.30546217E-02	-1.29070352E+00	-1.32212351E-02
1.22000E+03	-6.03263401E+01	-2.24792234E+05	8.30861404E+03	-1.30559980E-02	-1.39647740E+00	-1.32221703E-02
1.23000E+03	-7.49522355E+01	-1.41853881E+05	8.27860447E+03	-1.30572200E-02	-1.52870272E+00	-1.32227921E-02
1.24000E+03	-9.09004050E+01	-5.92291881E+04	8.24588185E+03	-1.30578901E-02	-1.66093122E+00	-1.32228077E-02
1.24200E+03	-9.42487130E+01	9.03723951E-14	2.67972775E-10	-1.30579438E-02	-1.68737429E+00	-1.30579438E-02

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t135,1

TRW SYSTEMS

t=135

Mode 2

Atlas SLV3A/Burner 2

BEAM 1						
OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
4.81851942E+01	2.32181294E+03	2.70137073E+02	2.73726489E+02	7.99293025E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	3.32618857E-02	-7.93241770E+00	3.32618857E-02
-3.70000E+01	-9.89034345E+01	-3.13008561E+04	-3.08451536E+03	3.31918220E-02	-7.25907296E+00	3.40254748E-02
-2.50000E+01	-1.83464947E+02	-7.87194182E+04	-4.80134931E+03	3.28720607E-02	-6.83451249E+00	3.56963838E-02
0.	-3.43120054E+02	-2.40215435E+05	-8.04255334E+03	3.11994931E-02	-5.94112724E+00	3.50292804E-02
2.50000E+01	-4.80807554E+02	-4.77126804E+05	-1.08375654E+04	2.90411231E-02	-5.08548778E+00	3.21375703E-02
5.00000E+01	-5.98053099E+02	-7.78644209E+05	-1.32175137E+04	2.73919881E-02	-4.30234628E+00	3.03292134E-02
7.50000E+01	-6.96359488E+02	-1.13480007E+06	-1.52130823E+04	2.59878221E-02	-3.56910377E+00	2.86567839E-02
1.00000E+02	-7.76788355E+02	-1.53627151E+06	-1.68454665E+04	2.42350123E-02	-2.86978399E+00	2.71903573E-02
1.25000E+02	-8.40263330E+02	-1.97420152E+06	-1.81335087E+04	2.19290206E-02	-2.21470306E+00	2.51103379E-02
1.50000E+02	-8.88086898E+02	-2.44029517E+06	-1.91036400E+04	1.90274048E-02	-1.61969906E+00	2.23789206E-02
1.75000E+02	-9.22207247E+02	-2.92707353E+06	-1.97959045E+04	1.74308318E-02	-1.11668954E+00	1.94104223E-02
2.00000E+02	-9.44216912E+02	-3.42803965E+06	-2.02422267E+04	1.55399823E-02	-6.51836442E-01	1.75642049E-02
2.25000E+02	-9.55270061E+02	-3.93732934E+06	-2.04660359E+04	1.33481854E-02	-2.39173754E-01	1.53947889E-02
2.50000E+02	-9.56749026E+02	-4.44971721E+06	-2.04954543E+04	1.11860269E-02	1.08951259E-01	1.22112981E-02
2.75000E+02	-9.50471271E+02	-4.96079732E+06	-2.03674584E+04	9.63840783E-03	3.87056748E-01	1.01784299E-02
3.00000E+02	-9.37801408E+02	-5.46701161E+06	-2.01098372E+04	8.28613156E-03	6.21799613E-01	8.64885221E-03
3.25000E+02	-9.19712433E+02	-5.96537366E+06	-1.97422616E+04	7.06203996E-03	8.21233247E-01	7.39186329E-03
3.50000E+02	-8.97032840E+02	-6.45334883E+06	-1.92815271E+04	5.92960366E-03	9.89439126E-01	6.14173788E-03
3.75000E+02	-8.70622729E+02	-8.27399982E+06	-1.09310260E+04	4.61352562E-03	1.11867809E+00	4.51288898E-03
3.85000E+02	-8.59221181E+02	-8.16465547E+06	1.09378858E+04	4.13506965E-03	1.16142061E+00	4.04045126E-03
4.00000E+02	-8.41377949E+02	-7.99759083E+06	1.13405526E+04	3.51526693E-03	1.21724200E+00	3.42425126E-03
4.25000E+02	-8.09988755E+02	-7.70531037E+06	1.20487761E+04	2.59466329E-03	1.29064300E+00	2.45512911E-03
4.50000E+02	-7.77062077E+02	-7.39486314E+06	1.27916783E+04	1.67114562E-03	1.34025400E+00	1.49047220E-03
4.75000E+02	-7.43193097E+02	-7.06554971E+06	1.35558758E+04	8.46724899E-04	1.36672789E+00	6.78850276E-04
5.00000E+02	-7.08883115E+02	-6.71698832E+06	1.43299209E+04	2.70649925E-04	1.37620951E+00	1.13178267E-04
5.25000E+02	-6.74490489E+02	-6.34903923E+06	1.51057819E+04	-1.36227870E-04	1.37387157E+00	-2.44760595E-04
5.50000E+02	-6.40269518E+02	-5.96173040E+06	1.58777959E+04	-5.31888507E-04	1.36181675E+00	-7.55519435E-04
5.75000E+02	-6.06516854E+02	-5.55523771E+06	1.66392789E+04	-9.96410330E-04	1.33691947E+00	-1.23076637E-03
5.77000E+02	-6.03845514E+02	-5.52189887E+06	1.66995352E+04	-1.03214309E-03	1.33442132E+00	-1.26734782E-03
6.00000E+02	-5.73530221E+02	-5.12991086E+06	1.73834505E+04	-1.42738814E-03	1.30056001E+00	-1.67222547E-03

6.25000E+02	-5.41587412E+02	-4.68626144E+06	1.81040889E+04	-1.82332262E-03	1.25360301E+00	-2.07830979E-03
6.50000E+02	-5.10941138E+02	-4.22495037E+06	1.87954712E+04	-2.18276184E-03	1.19695210E+00	-2.44748679E-03
6.75000E+02	-4.81822038E+02	-3.74677521E+06	1.94523943E+04	-2.50431277E-03	1.13154847E+00	-2.77829015E-03
7.00000E+02	-4.54436773E+02	-3.25265684E+06	2.00701964E+04	-2.78665174E-03	1.05835898E+00	-3.06933056E-03
7.25000E+02	-4.28967159E+02	-2.74362575E+06	2.06447760E+04	-3.02853387E-03	9.78424184E-01	-3.31930536E-03
7.50000E+02	-4.05569351E+02	-2.22080776E+06	2.11726103E+04	-3.22880132E-03	8.92756020E-01	-3.52700710E-03
7.75000E+02	-3.84371787E+02	-1.68540931E+06	2.16507885E+04	-3.38184580E-03	8.02642477E-01	-3.65942002E-03
8.00000E+02	-3.65462259E+02	-1.13869855E+06	2.20773453E+04	-3.48154138E-03	7.09863744E-01	-3.73530397E-03
8.25000E+02	-3.48890989E+02	-5.81981628E+05	2.24511530E+04	-3.53745819E-03	6.15651888E-01	-3.79551742E-03
8.50000E+02	-3.34686557E+02	-1.65861290E+04	2.27715601E+04	-3.55618469E-03	5.20659114E-01	-3.80642162E-03
8.75000E+02	-3.22855358E+02	5.56149912E+05	2.30384276E+04	-3.54082672E-03	4.25972449E-01	-3.77353811E-03
9.00000E+02	-3.13378918E+02	1.13604158E+06	2.33633524E+04	-3.49533798E-03	3.32388069E-01	-3.71368707E-03
9.25000E+02	-3.06221291E+02	1.72655586E+06	2.53168731E+04	-3.42428503E-03	2.40619021E-01	-3.62845336E-03
9.50000E+02	-3.01339916E+02	2.49392211E+06	3.52995393E+04	-3.32931036E-03	1.49937863E-01	-3.61398407E-03
9.75000E+02	-2.98712248E+02	3.45307654E+06	4.06710384E+04	-3.19465983E-03	6.05621813E-02	-3.52265208E-03
9.91000E+02	-2.98188947E+02	4.11477963E+06	4.17387153E+04	-3.08462337E-03	4.96596251E-03	-3.42122591E-03
1.00000E+03	-2.98281393E+02	4.48999341E+06	4.15486607E+04	-3.01421836E-03	-2.55093424E-02	-3.34928820E-03
1.02500E+03	-2.99938332E+02	5.49487525E+06	3.81539254E+04	-2.78731702E-03	-1.36213850E-01	-3.08539456E-03
1.05000E+03	-3.03522326E+02	6.36480494E+06	3.08157018E+04	-2.52656539E-03	-1.79513279E-01	-2.76731306E-03
1.07500E+03	-3.08831853E+02	7.00622328E+06	1.99484639E+04	-2.23696200E-03	-2.43980448E-01	-2.38583113E-03
1.10000E+03	-3.15629683E+02	7.33683378E+06	6.03525090E+03	-1.93418810E-03	-2.98565545E-01	-1.97824103E-03
1.12500E+03	-3.23669909E+02	7.28610817E+06	-1.07209379E+04	-1.69000952E-03	-3.43448696E-01	-1.61922301E-03
1.13300E+03	-3.26467519E+02	7.17557868E+06	-1.69485471E+04	-1.62036045E-03	-3.55953788E-01	-1.50737014E-03
1.16000E+03	-3.36570231E+02	6.40731224E+06	-3.82863311E+04	-1.40543980E-03	-3.90815402E-01	-1.07251518E-03
1.19000E+03	-3.48757901E+02	5.24684289E+06	-4.62509234E+04	-1.20503020E-03	-4.20471357E-01	-8.52788066E-04
1.20600E+03	-3.55588269E+02	4.45671583E+06	-5.19958033E+04	-1.11810421E-03	-4.33213203E-01	-7.46705618E-04
1.21200E+03	-3.58196548E+02	4.00838487E+06	-7.49574798E+04	-1.04229313E-03	-4.36212890E-01	-4.09583514E-04
1.22500E+03	-3.63880799E+02	3.02726702E+06	-7.59846442E+04	-9.04351870E-04	-4.38287329E-01	1.53583389E-04
1.24200E+03	-3.71182939E+02	1.72418362E+06	-7.73084839E+04	-7.82158435E-04	-4.14089576E-01	3.51275734E-03
1.25000E+03	-3.74382140E+02	1.10337899E+06	-7.78858492E+04	-7.47877401E-04	-3.85710573E-01	3.57911422E-03
1.26418E+03	-3.79487643E+02	-7.73084794E+03	-7.88073399E+04	-7.24254155E-04	-3.34363208E-01	3.65393140E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =					5.48892399E+00
1.26418E+03	-3.79487643E+02	-7.73084794E+03	9.71694703E+02	-7.24254155E-04	-3.34363208E-01	-7.78237194E-04
1.27500E+03	-3.83149943E+02	-7.78282542E+02	3.10761882E+02	-7.24374585E-04	-3.42586749E-01	-7.41639134E-04
1.28000E+03	-3.84872039E+02	-9.60669228E-07	2.26587312E-08	-7.24378541E-04	-3.46251874E-01	-7.24378541E-04

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION				
4.81851942E+01	2.32181294E+03	8.07512953E+00	4.48571299E+00	4.33246143E+00	0.				
STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-6.06305734E-03	-3.13659683E-01	-6.06305734E-03			
1.16200E+03	-6.37463231E-01	-2.07044763E+04	-1.03569078E+04	-6.06307804E-03	-3.25371722E-01	-5.85593988E-03			
1.16400E+03	-1.29991854E+00	-4.14222531E+04	-1.03608925E+04	-6.06314016E-03	-3.37183578E-01	-5.85592231E-03			
1.16600E+03	-1.98579754E+00	-6.21481403E+04	-1.03650181E+04	-6.06324373E-03	-3.48795437E-01	-5.85594337E-03			
1.16800E+03	-2.69510034E+00	-8.28824195E+04	-1.03692846E+04	-6.06338876E-03	-3.60507377E-01	-5.85500307E-03			
1.17000E+03	-3.42782717E+00	-1.03625373E+05	-1.03736920E+04	-6.06357527E-03	-3.72219475E-01	-5.85610143E-03			
1.18000E+03	-7.44284088E+00	-2.07480110E+05	-1.03978426E+04	-6.06513060E-03	-4.30785044E-01	-5.85717374E-03			
1.19000E+03	-1.20435801E+01	-3.11593968E+05	-1.04255163E+04	-6.06772574E-03	-4.99366181E-01	-5.85921541E-03			
1.20000E+03	-1.72302490E+01	-4.16002184E+05	-1.04567144E+04	-6.07136346E-03	-5.47972593E-01	-5.86222917E-03			
1.20600E+03	-2.06236180E+01	-4.78803069E+05	-1.04771257E+04	-6.07404781E-03	-5.83152620E-01	-5.86450530E-03			
1.21000E+03	-2.30067037E+01	-4.31827439E+05	1.17363609E+04	-6.07526197E-03	-6.08390794E-01	-6.30998919E-03			
1.21200E+03	-2.42361055E+01	-4.08362087E+05	1.17289660E+04	-6.07582209E-03	-6.21011191E-01	-6.31040141E-03			
1.22000E+03	-2.94061434E+01	-3.14653132E+05	1.16978679E+04	-6.07775002E-03	-6.71499991E-01	-6.31170738E-03			
1.23000E+03	-3.64367466E+01	-1.97882737E+05	1.16555784E+04	-6.07945824E-03	-7.34622089E-01	-6.31256981E-03			
1.24000E+03	-4.40985997E+01	-8.15542211E+04	1.16094919E+04	-6.08038944E-03	-7.97748544E-01	-6.31257928E-03			
1.24200E+03	-4.57067219E+01	-8.57354178E+07	-1.17275417E-07	-6.08046320E-03	-8.10370122E-01	-6.08046320E-03			

t=135

Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.64273413E+01	3.18404485E+03	2.70137073E+02	2.35457348E+02	2.04942196E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.700000E+01	0.	0.	0.	-6.17617031E-02	1.30802093E+01 -6.17617031E-02
-3.700000E+01	1.61665615E+02	7.05196484E+04	6.93562440E+03	-6.16037003E-02	1.18267119E+01 -6.34781933E-02
-2.500000E+01	2.98797228E+02	1.76922902E+05	1.07538387E+04	-6.08842774E-02	1.10285570E+01 -6.72100649E-02
0.	5.53399585E+02	5.36818330E+05	1.78421126E+04	-5.71365135E-02	9.34716296E+00 -6.56327575E-02
2.500000E+01	7.66817986E+02	1.05946172E+06	2.37831167E+04	-5.23282008E-02	7.75240589E+00 -5.91233770E-02
5.000000E+01	9.42497611E+02	1.71724560E+06	2.86732589E+04	-4.86784549E-02	6.32025465E+00 -5.50502902E-02
7.500000E+01	1.08380307E+03	2.48515515E+06	3.26067573E+04	-4.55920703E-02	4.99961502E+00 -5.13125541E-02
1.000000E+02	1.19311072E+03	3.34015266E+06	3.56486625E+04	-4.17679678E-02	3.75527065E+00 -4.80221191E-02
1.250000E+02	1.27249059E+03	4.26063408E+06	3.78569017E+04	-3.67735011E-02	2.60949053E+00 -4.34150628E-02
1.500000E+02	1.32482591E+03	5.22671196E+06	3.93117220E+04	-3.05358110E-02	1.59598807E+00 -3.74326043E-02
1.750000E+02	1.35432765E+03	6.22094772E+06	4.01318293E+04	-2.71297856E-02	7.74511435E-01 -3.11429686E-02
2.000000E+02	1.36440754E+03	7.22879215E+06	4.04109977E+04	-2.31272321E-02	4.42643099E-02 -2.71683319E-02
2.250000E+02	1.35754956E+03	8.23756262E+06	4.02183812E+04	-1.85239105E-02	-5.78503105E-01 -2.25457486E-02
2.500000E+02	1.33669141E+03	9.23645147E+06	3.96359633E+04	-1.40168152E-02	-1.06580832E+00 -1.59995773E-02
2.750000E+02	1.30558155E+03	1.02170036E+07	3.87683242E+04	-1.08165986E-02	-1.41027768E+00 -1.18445006E-02
3.000000E+02	1.26700596E+03	1.11731437E+07	3.76932334E+04	-8.04205723E-03	-1.66610834E+00 -8.72192917E-03
3.250000E+02	1.22295047E+03	1.21003975E+07	3.64657515E+04	-5.54962054E-03	-1.85003745E+00 -6.04800877E-03
3.500000E+02	1.17509729E+03	1.29955525E+07	3.51326446E+04	-3.26081748E-03	-1.97076397E+00 -3.64734475E-03
3.750000E+02	1.12519821E+03	1.34260660E+07	4.69603239E+04	-1.04752641E-03	-2.01310150E+00 -6.15185547E-04
3.850000E+02	1.10505358E+03	1.29563797E+07	4.69769446E+04	-2.79579461E-04	-2.01549321E+00 1.26795492E-04
4.000000E+02	1.07488586E+03	1.22447184E+07	4.79105177E+04	6.87434893E-04	-2.00620634E+00 1.07194948E-03
4.250000E+02	1.02524316E+03	1.10276812E+07	4.94465074E+04	2.05287768E-03	-1.96021214E+00 2.62550660E-03
4.500000E+02	9.77206769E+02	9.77280811E+06	5.09327797E+04	3.32480774E-03	-1.87779710E+00 4.04419728E-03
4.750000E+02	9.31652942E+02	8.48168541E+06	5.23422909E+04	4.36839496E-03	-1.76353483E+00 5.01659670E-03
5.000000E+02	8.89208578E+02	7.15649891E+06	5.36554239E+04	5.02419649E-03	-1.63010155E+00 5.61381653E-03
5.250000E+02	8.50252316E+02	5.79981555E+06	5.48605710E+04	5.42932627E-03	-1.48532638E+00 5.82349106E-03
5.500000E+02	8.15014034E+02	4.41442410E+06	5.59507229E+04	5.75254713E-03	-1.33030608E+00 6.54058548E-03
5.750000E+02	7.83840098E+02	3.00333042E+06	5.69151581E+04	6.05181218E-03	-1.16263995E+00 6.85343412E-03
5.770000E+02	7.81528545E+02	2.88942845E+06	5.69866618E+04	6.07082116E-03	-1.14891294E+00 6.87345019E-03
6.000000E+02	7.56941489E+02	1.56976947E+06	5.77472826E+04	6.23635118E-03	-9.88606048E-01 7.04969319E-03

6.25000E+02	7.34441669E+02	1.17101162E+05	-5.84433048E+04	6.30448710E-03	-8.11141383E-01	7.12763224E-03
6.50000E+02	7.16388801E+02	-1.35124834E+06	-5.90017202E+04	6.25481692E-03	-6.33222400E-01	7.08582706E-03
6.75000E+02	7.02756682E+02	-2.83184416E+06	-5.94233388E+04	6.08621466E-03	-4.57857281E-01	6.92316309E-03
7.00000E+02	6.93443596E+02	-4.32130081E+06	-5.97113067E+04	5.79782977E-03	-2.88078213E-01	6.63883409E-03
7.25000E+02	6.88271803E+02	-5.81634084E+06	-5.98711218E+04	5.38908073E-03	-1.26933742E-01	6.23233597E-03
7.50000E+02	6.86987229E+02	-7.31385373E+06	-5.99106432E+04	4.85964402E-03	2.25186518E-02	5.70345590E-03
7.75000E+02	6.89260314E+02	-9.81095517E+06	-5.98401476E+04	4.23163560E-03	1.56767108E-01	4.99881698E-03
8.00000E+02	6.94666042E+02	-1.03050539E+07	-5.96727325E+04	3.55947858E-03	2.73105634E-01	4.24537206E-03
8.25000E+02	7.02738388E+02	-1.17939041E+07	-5.94227370E+04	2.84194610E-03	3.70438080E-01	3.52496607E-03
8.50000E+02	7.13025884E+02	-1.32756248E+07	-5.91448871E+04	2.06358172E-03	4.48270136E-01	2.71308598E-03
8.75000E+02	7.24958535E+02	-1.47487135E+07	-5.87349236E+04	1.25153840E-03	5.04927481E-01	1.84482045E-03
9.00000E+02	7.38057121E+02	-1.62099155E+07	-5.81117768E+04	4.14139568E-04	5.39783031E-01	9.57240286E-04
9.25000E+02	7.51749153E+02	-1.76451307E+07	-5.22381104E+04	-4.32128694E-04	5.52116763E-01	-1.08536101E-05
9.50000E+02	7.65416414E+02	-1.84693190E+07	-1.38649976E+04	-1.25654738E-03	5.37733003E-01	-1.14473288E-03
9.75000E+02	7.78368212E+02	-1.83551006E+07	2.25015951E+04	-2.09691171E-03	4.94882747E-01	-2.27837618E-03
9.91000E+02	7.85955764E+02	-1.78221198E+07	4.38062796E+04	-2.62395169E-03	4.52796954E-01	-2.97722814E-03
1.00000E+03	7.89902671E+02	-1.73774790E+07	5.48829137E+04	-2.91208426E-03	4.24293528E-01	-3.35468840E-03
1.02500E+03	7.99345815E+02	-1.56598812E+07	8.13999162E+04	-3.66444451E-03	3.28080866E-01	-4.30038136E-03
1.05000E+03	8.06107276E+02	-1.33702795E+07	1.00392432E+05	-4.30280747E-03	2.10393292E-01	-5.08712334E-03
1.07500E+03	8.09706939E+02	-1.07143822E+07	1.10506788E+05	-4.82412287E-03	7.58453997E-02	-5.64880039E-03
1.10000E+03	8.19787289E+02	-7.92732188E+06	1.10746761E+05	-5.21664313E-03	-7.05297774E-02	-6.02501365E-03
1.12500E+03	8.26146908E+02	-5.26480305E+06	1.00287385E+05	-5.43631093E-03	-2.21264654E-01	-6.09847253E-03
1.13300E+03	8.04181378E+02	-4.48570377E+06	9.42886783E+04	-5.48323053E-03	-2.70117949E-01	-6.11182172E-03
1.16000E+03	7.94650055E+02	-2.30795621E+06	6.71932182E+04	-5.58831267E-03	-4.36158994E-01	-6.17260152E-03
1.19000E+03	7.78662065E+02	6.21013522E+05	8.35686227E+04	-5.61466901E-03	-6.28355797E-01	-6.25111879E-03
1.20600E+03	7.67816948E+02	1.85148524E+06	7.11289744E+04	-5.59228271E-03	-7.27122220E-01	-6.10034682E-03
1.21200E+03	7.63357613E+02	1.68956290E+06	-2.75428325E+04	-5.56056195E-03	-7.59322742E-01	-5.32807528E-03
1.22500E+03	7.53045367E+02	1.31514993E+06	-3.00956039E+04	-5.50156133E-03	-8.27176615E-01	-5.08253982E-03
1.24200E+03	7.38304932E+02	7.72953183E+05	-3.37470799E+04	-5.44763748E-03	-9.04003424E-01	-3.57279971E-03
1.25000E+03	7.30960446E+02	4.95743037E+05	-3.55647338E+04	-5.43223077E-03	-9.32117867E-01	-3.45641223E-03
1.26418E+03	7.17404986E+02	-3.21556988E+04	-3.89199147E+04	-5.42208506E-03	-9.79720424E-01	-3.25986758E-03
1.2641800E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			2.15370824E+00		
1.26418E+03	7.17404986E+02	-3.21556988E+04	4.00805804E+03	-5.42208506E-03	-9.79720424E-01	-5.64475495E-03
1.27500E+03	7.06478323E+02	-3.27340677E+03	1.30373413E+03	-5.42258791E-03	-1.03999553E+00	-5.49501758E-03
1.28000E+03	7.01210108E+02	9.69804924E-13	3.87642869E-15	-5.42260457E-03	-1.06729039E+00	-5.42260457E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION				
5.64273413E+01	3.18404485E+03	8.07512953E+00	4.27548540E+01	3.90385706E+01	0.				
STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-2.98622398E-02	-4.64642467E-02	-2.98622398E-02	
1.16200E+03	-1.50541263E-01	-9.39726910E+04	-4.69876049E+04	-2.98623338E-02	-1.04309335E-01	-2.89225817E-02			
1.16400E+03	-4.17005237E-01	-1.87949940E+05	-4.69898029E+04	-2.98626157E-02	-1.62154708E-01	-2.89228196E-02			
1.16600E+03	-7.99160555E-01	-2.81932539E+05	-4.69929553E+04	-2.98630856E-02	-2.20000726E-01	-2.89232265E-02			
1.16800E+03	-1.29700884E+00	-3.75922397E+05	-4.69970619E+04	-2.98637434E-02	-2.77847727E-01	-2.89238022E-02			
1.17000E+03	-1.91055240E+00	-4.69921423E+05	-4.70021230E+04	-2.98645893E-02	-3.35696047E-01	-2.89245468E-02			
1.18000E+03	-6.71382725E+00	-9.40120875E+05	-4.70417443E+04	-2.98716391E-02	-6.24969282E-01	-2.89308043E-02			
1.19000E+03	-1.44102180E+01	-1.41083586E+06	-4.71052304E+04	-2.98833934E-02	-9.14326223E-01	-2.89412888E-02			
1.20000E+03	-2.50007731E+01	-1.88230506E+06	-4.71925900E+04	-2.98998584E-02	-1.20380917E+00	-2.89560066E-02			
1.20600E+03	-3.27448997E+01	-2.16564794E+06	-4.72564699E+04	-2.99120020E-02	-1.37757704E+00	-2.89668726E-02			
1.21000E+03	-3.85024306E+01	-1.96789969E+06	4.94119110E+04	-2.99175134E-02	-1.50119121E+00	-3.09057516E-02			
1.21200E+03	-4.15666260E+01	-1.86910097E+06	4.93866350E+04	-2.99200714E-02	-1.56300479E+00	-3.09078041E-02			
1.22000E+03	-5.50597923E+01	-1.47444223E+06	4.92753323E+04	-2.99289871E-02	-1.81029561E+00	-3.09144937E-02			
1.23000E+03	-7.47085716E+01	-9.82478047E+05	4.91132530E+04	-2.99371759E-02	-2.11946844E+00	-3.09194410E-02			
1.24000E+03	-9.74492632E+01	-4.92262182E+05	4.89256691E+04	-2.99420907E-02	-2.42867181E+00	-3.09206041E-02			
1.24200E+03	-1.02368448E+02	8.30192380E-14	3.11687976E-09	-2.99425501E-02	-2.49049812E+00	-2.99425501E-02			

t=135

Mode 4

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION			
7.42582609E+01	5.51428931E+03	2.70137073E+02	7.51717820E+01	6.99364039E+01	3.				
STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.			2.51765332E-02	-4.32585574E+00	2.51765332E-02	
-3.70000E+01	-5.24809205E+01	-4.00775757E+04	-3.92514822E+03			2.50865541E-02	-3.81194743E+00	2.61474050E-02	
-2.50000E+01	-9.62189918E+01	-1.00028192E+05	-6.03442323E+03			2.46788881E-02	-3.47773113E+00	2.82285489E-02	
0.	-1.74291626E+02	-2.99721606E+05	-9.79878902E+03			2.25739544E-02	-2.77267197E+00	2.72400444E-02	
2.50000E+01	-2.35251112E+02	-5.83079735E+05	-1.27373438E+04			1.99081015E-02	-2.11883061E+00	2.35473426E-02	
5.00000E+01	-2.81065145E+02	-9.30529364E+05	-1.40454714E+04			1.79145775E-02	-1.55648140E+00	2.12357934E-02	
7.50000E+01	-3.13618786E+02	-1.32503131E+06	-1.65146084E+04			1.62549846E-02	-1.05632303E+00	1.91522843E-02	
1.00000E+02	-3.34241162E+02	-1.75145891E+06	-1.75077396E+04			1.42336986E-02	-5.99233323E-01	1.73052318E-02	
1.25000E+02	-3.44091289E+02	-2.19608051E+06	-1.79810707E+04			1.16379284E-02	-1.96615065E-01	1.47925022E-02	
1.50000E+02	-3.44739787E+02	-2.64680567E+06	-1.80103261E+04			8.45189647E-03	1.34818135E-01	1.16116028E-02	
1.75000E+02	-3.38361691E+02	-3.09379689E+06	-1.77017090E+04			6.74300040E-03	3.70007858E-01	8.51317131E-03	
2.00000E+02	-3.26681732E+02	-3.52975671E+06	-1.71372821E+04			4.77100396E-03	5.58069585E-01	6.48473217E-03	
2.25000E+02	-3.10966741E+02	-3.94903580E+06	-1.63781340E+04			2.54423055E-03	6.91957908E-01	4.18204395E-03	
2.50000E+02	-2.92671893E+02	-4.34761960E+06	-1.54946390E+04			4.01795695E-04	7.60610430E-01	1.17690443E-03	
2.75000E+02	-2.73530757E+02	-4.72344454E+06	-1.45735487E+04			-1.09140681E-03	7.64921022E-01	-7.05083778E-04	
3.00000E+02	-2.54801452E+02	-5.07631890E+06	-1.36665234E+04			-2.36315726E-03	7.29056168E-01	-2.11665271E-03	
3.25000E+02	-2.37381125E+02	-5.40730472E+06	-1.28259504E+04			-3.48627975E-03	6.60866347E-01	-3.31098369E-03	
3.50000E+02	-2.22021284E+02	-5.71844626E+06	-1.20847106E+04			-4.50122199E-03	5.64639365E-01	-4.36826672E-03	
3.75000E+02	-2.09434345E+02	-1.26580466E+06	2.81765793E+04			-4.79784235E-03	4.41102611E-01	-5.05725091E-03	
3.85000E+02	-2.05277391E+02	-9.84008564E+05	2.81825183E+04			-4.86338979E-03	3.90266749E-01	-5.10718320E-03	
4.00000E+02	-2.00000629E+02	-5.59073110E+05	2.84652349E+04			-4.92309003E-03	3.13273429E-01	-5.15154296E-03	
4.25000E+02	-1.93791889E+02	1.57078582E+05	2.87978477E+04			-4.94759155E-03	1.83183627E-01	-5.28109297E-03	
4.50000E+02	-1.90856472E+02	8.79356804E+05	2.89550625E+04			-4.88395865E-03	5.14834715E-02	-5.29292846E-03	
4.75000E+02	-1.91202674E+02	1.60336287E+06	2.89364001E+04			-4.74489373E-03	-7.85288274E-02	-5.10323925E-03	
5.00000E+02	-1.94737027E+02	2.32475340E+06	2.87469542E+04			-4.58255897E-03	-2.03499345E-01	-4.89845956E-03	
5.25000E+02	-2.01330174E+02	3.03934505E+06	2.83935571E+04			-4.41692249E-03	-2.23178715E-01	-4.62092656E-03	
5.50000E+02	-2.10855454E+02	3.74313094E+06	2.78832250E+04			-4.19451193E-03	-4.39265388E-01	-4.58723341E-03	
5.75000E+02	-2.23232325E+02	4.43222902E+06	2.72199393E+04			-3.86474886E-03	-5.49827537E-01	-4.24812828E-03	
5.77000E+02	-2.24340446E+02	4.48660969E+06	2.71605751E+04			-3.83597824E-03	-5.58294247E-01	-4.21852166E-03	
6.00000E+02	-2.38261441E+02	5.10294335E+06	2.64145758E+04			-3.48013076E-03	-6.51197906E-01	-3.85216704E-03	

6.25000E+02	-2.55693686E+02	5.75188371E+06	2.54803871E+04	-3.04227914E-03	-7.41977069E-01	-3.40115784E-03
6.50000E+02	-2.75248196E+02	6.37601441E+06	2.44324680E+04	-2.55307490E-03	-8.20814433E-01	-2.89719417E-03
6.75000E+02	-2.96610146E+02	6.97269940E+06	2.32876859E+04	-2.01462795E-03	-8.86414985E-01	-2.34262352E-03
7.00000E+02	-3.19433097E+02	7.53974569E+06	2.20646017E+04	-1.42924318E-03	-9.37545215E-01	-1.74001222E-03
7.25000E+02	-3.43340597E+02	8.07544458E+06	2.07833845E+04	-7.99383117E-04	-9.73038103E-01	-1.09210684E-03
7.50000E+02	-3.67927893E+02	8.57861075E+06	1.94657196E+04	-1.27627206E-04	-9.91797118E-01	-4.01792271E-04
7.75000E+02	-3.92766235E+02	9.04861902E+06	1.81347322E+04	5.60185504E-04	-9.92717966E-01	3.27688937E-04
8.00000E+02	-4.17405201E+02	9.48543723E+06	1.68144386E+04	1.21249268E-03	-9.76031835E-01	1.01922327E-03
8.25000E+02	-4.41412579E+02	9.88962274E+06	1.55278731E+04	1.84172715E-03	-9.42554574E-01	1.66324585E-03
8.50000E+02	-4.64381609E+02	1.02622953E+07	1.42970413E+04	2.46767271E-03	-8.92811769E-01	2.31056237E-03
8.75000E+02	-4.85906445E+02	1.06051199E+07	1.31436217E+04	3.07277739E-03	-8.27019693E-01	2.94001354E-03
9.00000E+02	-5.05593379E+02	1.09146489E+07	1.15317560E+04	3.65534361E-03	-7.45804311E-01	3.54757018E-03
9.25000E+02	-5.23062545E+02	1.11648329E+07	-6.72850220E+02	4.20821826E-03	-6.49551764E-01	4.21364447E-03
9.50000E+02	-5.37854510E+02	1.02189271E+07	-7.25886028E+04	4.70102602E-03	-5.30467996E-01	5.28641797E-03
9.75000E+02	-5.49356197E+02	7.66888237E+06	-1.28509769E+05	5.11286502E-03	-3.86987564E-01	6.14923412E-03
9.91000E+02	-5.54737192E+02	5.39289384E+06	-1.54671091E+05	5.30386859E-03	-2.85210777E-01	6.55121610E-03
1.00000E+03	-5.57035240E+02	3.94864296E+06	-1.65838501E+05	5.38043632E-03	-2.25466518E-01	6.71784358E-03
1.02500E+03	-5.60537352E+02	-4.53520754E+05	-1.82862961E+05	5.46150660E-03	-5.40698259E-02	6.89012348E-03
1.05000E+03	-5.59743985E+02	-5.02012934E+06	-1.79000584E+05	5.34111679E-03	1.17057345E-01	6.73955885E-03
1.07500E+03	-5.54767111E+02	-9.23363572E+06	-1.54799657E+05	5.03173634E-03	2.79132769E-01	6.18695766E-03
1.10000E+03	-5.45941940E+02	-1.26039367E+07	-1.11885366E+05	4.56935764E-03	4.24302609E-01	5.38603914E-03
1.12500E+03	-5.33772851E+02	-1.46898198E+07	-5.15950218E+04	4.11255252E-03	5.46369106E-01	4.45321593E-03
1.13300E+03	-5.29264150E+02	-1.50081901E+07	-2.77548857E+04	3.96947254E-03	5.80806161E-01	4.15450511E-03
1.16000E+03	-5.12219650E+02	-1.45295150E+07	5.75061694E+04	3.49959469E-03	6.77588274E-01	2.99954104E-03
1.19000E+03	-4.91457270E+02	-5.60232377E+06	3.28075397E+05	3.14952240E-03	7.04135494E-01	6.50934937E-04
1.20600E+03	-4.80113274E+02	-1.54847225E+05	3.50750375E+05	3.09739988E-03	7.13823136E-01	5.92040062E-04
1.21200E+03	-4.75773885E+02	-1.86110754E+05	-4.27667943E+03	3.09432987E-03	7.32639873E-01	3.13042895E-03
1.22500E+03	-4.65986595E+02	-2.14685561E+05	-8.18657500E+01	3.08629555E-03	7.73096917E-01	3.08743537E-03
1.24200E+03	-4.52408706E+02	-1.67129300E+05	5.73850221E+03	3.07605956E-03	8.23683976E-01	2.75725388E-03
1.25000E+03	-4.45733592E+02	-1.09825672E+05	8.59963792E+03	3.07265646E-03	8.45094381E-01	2.59489880E-03
1.26418E+03	-4.33503159E+02	4.90434359E+04	1.38430162E+04	3.07108273E-03	8.79819342E-01	2.30202627E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-5.78954984E-01		
1.26418E+03	-4.33503159E+02	4.90434359E+04	-6.14219204E+03	3.07108273E-03	8.79819342E-01	3.41231562E-03
1.27500E+03	-4.23790466E+02	4.96056679E+03	-1.97864313E+03	3.07184799E-03	9.15502948E-01	3.18177261E-03
1.28000E+03	-4.19173864E+02	-3.48485300E-06	-3.98993092E-08	3.07187322E-03	9.31137869E-01	3.07187322E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.42582609E+01	5.51428931E+03	8.07512953E+00	2.03041120E+02	1.68589944E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-9.08513614E-02	2.35023297E+00 -9.08513614E-02
1.16200E+03	4.51426477E+00	-3.62527045E+05	-1.81182938E+05	-9.08517240E-02	2.17578055E+00 -8.72280653E-02
1.16400E+03	8.69136821E+00	-7.24832416E+05	-1.81123265E+05	-9.08528114E-02	2.00132224E+00 -8.72303461E-02
1.16600E+03	1.25195500E+01	-1.08702343E+06	-1.81068576E+05	-9.08546233E-02	1.82685875E+00 -8.72332518E-02
1.16800E+03	1.59987986E+01	-1.44911004E+06	-1.81018873E+05	-9.08571594E-02	1.65238882E+00 -8.72367820E-02
1.17000E+03	1.91290998E+01	-1.81110224E+06	-1.80974154E+05	-9.08604197E-02	1.47791120E+00 -8.72409366E-02
1.18000E+03	2.95457261E+01	-3.61999586E+06	-1.80825345E+05	-9.08875764E-02	6.05364169E-01 -8.72710695E-02
1.19000E+03	3.12351147E+01	-5.42802472E+06	-1.80801211E+05	-9.09328167E-02	-2.67562153E-01 -8.73167925E-02
1.20000E+03	2.41926933E+01	-7.23643588E+06	-1.80901817E+05	-9.09961382E-02	-1.14102363E+00 -8.73781018E-02
1.20600E+03	1.57734861E+01	-8.32218513E+06	-1.81022091E+05	-9.10428137E-02	-1.66542225E+00 -8.74223718E-02
1.21000E+03	8.35554751E+00	-7.62606163E+06	1.73973857E+05	-9.10640779E-02	-2.04355912E+00 -9.45435550E-02
1.21200E+03	4.07933583E+00	-7.27817410E+06	1.73912768E+05	-9.10740140E-02	-2.23265504E+00 -9.45522694E-02
1.22000E+03	-1.68079139E+01	-5.88800788E+06	1.73614379E+05	-9.11091228E-02	-2.98919585E+00 -9.45814104E-02
1.23000E+03	-5.14293967E+01	-4.15422444E+06	1.73119786E+05	-9.11425942E-02	-3.93513974E+00 -9.46049899E-02
1.24000E+03	-9.55112590E+01	-2.42606266E+06	1.72497045E+05	-9.11645250E-02	-4.88124817E+00 -9.46143258E-02
1.24200E+03	-1.15462984E+02	1.33836845E-06	-2.04526896E-06	-9.11668352E-02	-5.07042514E+00 -9.11668352E-02

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Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
1.06921933E+02	1.14322997E+04	2.70137073E+02	2.75219769E+02	9.60311901E+01	0.	
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-8.20919889E-02	1.05134933E+01	-8.20919889E-02
-3.70000E+01	1.23157688E+02	1.99059499E+05	1.93415474E+04	-8.16433636E-02	8.82012560E+00	-8.68708088E-02
-2.50000E+01	2.22149232E+02	4.91922587E+05	2.92410851E+04	-7.96297705E-02	7.67846503E+00	-9.68304088E-02
0.	3.83726478E+02	1.43744021E+06	4.53925804E+04	-6.94126165E-02	5.27355566E+00	-9.10281309E-02
2.50000E+01	4.88018322E+02	2.71370825E+06	5.58104680E+04	-5.68114898E-02	3.14215580E+00	-7.27573378E-02
5.00000E+01	5.44886282E+02	4.18871613E+06	6.14863245E+04	-4.76816382E-02	1.45580946E+00	-6.13452659E-02
7.50000E+01	5.63411951E+02	5.75616005E+06	6.3337398E+04	-4.03354801E-02	6.58660363E-02	-5.14466625E-02
1.00000E+02	5.49951658E+02	7.32869204E+06	6.19767002E+04	-3.17232883E-02	-1.11506399E+00	-4.25963936E-02
1.25000E+02	5.10032031E+02	8.83287948E+06	5.79715217E+04	-2.10796755E-02	-2.04311836E+00	-3.12501179E-02
1.50000E+02	4.50727879E+02	1.02110533E+07	5.20257223E+04	-8.53444901E-03	-2.65885860E+00	-1.76617687E-02
1.75000E+02	3.80781667E+02	1.14255146E+07	4.50245987E+04	-2.08630656E-03	-2.91457036E+00	-6.58876643E-03
2.00000E+02	3.06763955E+02	1.24588702E+07	3.76155493E+04	5.03133540E-03	-2.98237452E+00	1.26978047E-03
2.25000E+02	2.33575955E+02	1.33069664E+07	3.02887012E+04	1.27088317E-02	-2.84648361E+00	9.67996161E-03
2.50000E+02	1.66468556E+02	1.39783635E+07	2.35712146E+04	1.97740868E-02	-2.49074785E+00	1.85949528E-02
2.75000E+02	1.10699203E+02	1.44950743E+07	1.79893860E+04	2.44678617E-02	-1.95423457E+00	2.39908917E-02
3.00000E+02	6.98396463E+01	1.48902916E+07	1.38997484E+04	2.82850813E-02	-1.30202038E+00	2.80343718E-02
3.25000E+02	4.64548327E+01	1.52046395E+07	1.15578307E+04	3.15111333E-02	-5.58478752E-01	3.13531690E-02
3.50000E+02	4.26343497E+01	1.54844945E+07	1.11721804E+04	3.43114128E-02	2.61634640E-01	3.41884972E-02
3.75000E+02	5.90855718E+01	-4.26127604E+07	5.64007391E+04	2.80276837E-02	1.03205157E+00	2.75084295E-02
3.85000E+02	7.07254915E+01	-4.20485869E+07	5.64352574E+04	2.55635691E-02	1.29484611E+00	2.50753748E-02
4.00000E+02	9.28010098E+01	-4.11843668E+07	5.88918065E+04	2.23716439E-02	1.64631404E+00	2.18989970E-02
4.25000E+02	1.40224404E+02	-3.96489717E+07	6.41638225E+04	1.76322442E-02	2.13076599E+00	1.68891773E-02
4.50000E+02	1.98219963E+02	-3.79663934E+07	7.06100026E+04	1.28847193E-02	2.49207518E+00	1.18874028E-02
4.75000E+02	2.63703624E+02	-3.61115513E+07	7.78888760E+04	8.66004412E-03	2.73352697E+00	7.69547599E-03
5.00000E+02	3.34084200E+02	-3.40674651E+07	8.57090748E+04	5.72546346E-03	2.88735077E+00	4.78360550E-03
5.25000E+02	4.07518044E+02	-3.18232999E+07	9.38671498E+04	3.67243276E-03	2.98060919E+00	2.99801170E-03
5.50000E+02	4.82703936E+02	-2.93724530E+07	1.02220424E+05	1.70754194E-03	3.02334803E+00	2.67817654E-04
5.75000E+02	5.58086181E+02	-2.67121081E+07	1.10596263E+05	-5.55339807E-04	2.99983394E+00	-2.11303365E-03
5.77000E+02	5.64081441E+02	-2.64902495E+07	1.11262134E+05	-7.26961031E-04	2.99542663E+00	-2.29403334E-03
6.00000E+02	6.32167323E+02	-2.38438560E+07	1.18826726E+05	-2.59526984E-03	2.91987150E+00	-4.26888570E-03

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6.25000E+02	7.03591456E+02	-2.07732345E+07	1.26762271E+05	-4.39567954E-03	2.78842052E+00	-6.18106365E-03
6.50000E+02	7.71169496E+02	-1.75093109E+07	1.34270267E+05	-5.94059218E-03	2.61269798E+00	-7.83172270E-03
6.75000E+02	8.33870873E+02	-1.40642440E+07	1.41236229E+05	-7.21488990E-03	2.39915355E+00	-9.20413256E-03
7.00000E+02	8.90838837E+02	-1.04528158E+07	1.47564978E+05	-8.20454444E-03	2.15493864E+00	-1.02829244E-02
7.25000E+02	9.41400045E+02	-6.69193509E+06	1.53181710E+05	-8.89680879E-03	1.88756968E+00	-1.10542977E-02
7.50000E+02	9.85073178E+02	-2.80011615E+06	1.58032949E+05	-9.28036790E-03	1.60488671E+00	-1.15061841E-02
7.75000E+02	1.02158161E+03	1.20306677E+06	1.62087941E+05	-9.34709009E-03	1.31643404E+00	-1.14251406E-02
8.00000E+02	1.05093712E+03	5.29765860E+06	1.65348161E+05	-9.12056723E-03	1.03341457E+00	-1.10211278E-02
8.25000E+02	1.07337385E+03	9.46406879E+06	1.67839451E+05	-8.64162734E-03	7.62933698E-01	-1.05708164E-02
8.50000E+02	1.08923778E+03	1.36835393E+07	1.69600600E+05	-7.92368269E-03	5.08743350E-01	-9.78742555E-03
8.75000E+02	1.09902327E+03	1.79384619E+07	1.70686505E+05	-7.00873344E-03	2.77859238E-01	-8.73283956E-03
9.00000E+02	1.10337595E+03	2.22154893E+07	1.71395647E+05	-5.92393849E-03	7.48223511E-02	-7.52576697E-03
9.25000E+02	1.10304102E+03	2.64965380E+07	1.68453584E+05	-4.70840122E-03	-9.60562713E-02	-6.06689787E-03
9.50000E+02	1.09892326E+03	3.02562754E+07	1.26773640E+05	-3.41460699E-03	-2.28271104E-01	-4.43697506E-03
9.75000E+02	1.09205646E+03	3.26034082E+07	5.73619446E+04	-1.97939220E-03	-3.14847291E-01	-2.44198852E-03
9.91000E+02	1.08678233E+03	3.31009387E+07	4.07758181E+03	-1.02162898E-03	-3.42886971E-01	-1.05451270E-03
1.00000E+03	1.08366972E+03	3.29967491E+07	-2.73200639E+04	-4.80445035E-04	-3.48804776E-01	-2.60121940E-04
1.02500E+03	1.07512276E+03	3.12237082E+07	-1.13648570E+05	9.85304253E-04	-3.28031481E-01	1.87318370E-03
1.05000E+03	1.06773552E+03	2.74122624E+07	-1.88287780E+05	2.27801137E-03	-2.57114357E-01	3.74900965E-03
1.07500E+03	1.06265321E+03	2.20045080E+07	-2.39637600E+05	3.35039288E-03	-1.45129153E-01	5.13868093E-03
1.10000E+03	1.06075289E+03	1.56989950E+07	-2.58891531E+05	4.14604673E-03	-4.23577948E-03	6.03576593E-03
1.12500E+03	1.06251564E+03	9.37039904E+06	-2.40599611E+05	4.56415318E-03	1.46380239E-01	6.15274605E-03
1.13300E+03	1.06388366E+03	7.50269204E+06	-2.25608133E+05	4.64533598E-03	1.95623373E-01	6.14939020E-03
1.16000E+03	1.07140923E+03	2.42261688E+06	-1.49267694E+05	4.79647514E-03	3.61690308E-01	6.09445608E-03
1.19000E+03	1.08465706E+03	9.80241522E+05	-6.23927447E+03	4.84683022E-03	5.18440864E-01	4.89434787E-03
1.20600E+03	1.09356316E+03	1.19542482E+06	3.04621909E+04	4.86540382E-03	5.94570468E-01	4.64781674E-03
1.21200E+03	1.09722324E+03	9.84792415E+05	-3.34657081E+04	4.88489903E-03	6.25454782E-01	5.16738018E-03
1.22500E+03	1.10579499E+03	5.98386769E+05	-2.58508838E+04	4.91560440E-03	6.93276612E-01	5.27552662E-03
1.24200E+03	1.11836428E+03	2.51822684E+05	-1.46878406E+04	4.93663775E-03	7.86495339E-01	5.75262890E-03
1.25000E+03	1.12483535E+03	1.57112511E+05	-8.93667446E+03	4.94150134E-03	8.31271094E-01	5.43798326E-03
1.26418E+03	1.13714129E+03	1.06881698E+05	2.00490090E+03	4.94662763E-03	9.04171025E-01	4.83524424E-03
1.26418000E+03	TOTAL DEFECTION OF THE SPRING MASS SYSTEM =			-2.14065272E-01		
1.26418E+03	1.13714129E+03	1.06881698E+05	-1.33149364E+04	4.94662763E-03	9.04171025E-01	5.68634631E-03
1.27500E+03	1.14724289E+03	1.08847785E+04	-4.33514621E+03	4.94829945E-03	9.63038573E-01	5.18914091E-03
1.28000E+03	1.15212145E+03	5.28930909E-05	2.41253873E-07	4.94835484E-03	9.88384987E-01	4.94835484E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.06921933E+02	1.14322997E+04	8.07512953E+00	2.99243263E+00	2.05781688E+00	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-1.49457021E-02	7.99496614E-01	-1.49457021E-02
1.16200E+03	1.56665855E+00	-7.76301659E+04	-3.87576330E+04	-1.49457798E-02	7.71157761E-01	-1.41706271E-02		
1.16400E+03	3.08063203E+00	-1.55100312E+05	-3.87127931E+04	-1.49460125E-02	7.42815398E-01	-1.41717567E-02		
1.16600E+03	4.53791844E+00	-2.32482458E+05	-3.86696321E+04	-1.49464001E-02	7.14470654E-01	-1.41730075E-02		
1.16800E+03	5.93851277E+00	-3.09779960E+05	-3.86281502E+04	-1.49469424E-02	6.86123287E-01	-1.41743794E-02		
1.17000E+03	7.28240954E+00	-3.86996178E+05	-3.85883476E+04	-1.49476392E-02	6.57773055E-01	-1.41758722E-02		
1.18000E+03	1.31512040E+01	-7.71975564E+05	-3.84145294E+04	-1.49534355E-02	5.15970478E-01	-1.41851449E-02		
1.19000E+03	1.76014587E+01	-1.15542681E+06	-3.82827246E+04	-1.49630736E-02	3.74060152E-01	-1.41974191E-02		
1.20000E+03	2.06319465E+01	-1.53777022E+06	-3.81929695E+04	-1.49765403E-02	2.32012137E-01	-1.42126810E-02		
1.20600E+03	2.17681286E+01	-1.76681951E+06	-3.81593188E+04	-1.49864542E-02	1.46704826E-01	-1.42232678E-02		
1.21000E+03	2.22303476E+01	-1.64940637E+06	2.93599199E+04	-1.49910092E-02	8.44015324E-02	-1.55782076E-02		
1.21200E+03	2.23679926E+01	-1.59068215E+06	2.93639966E+04	-1.49931693E-02	5.32428564E-02	-1.55804492E-02		
1.22000E+03	2.22952724E+01	-1.35575910E+06	2.93618429E+04	-1.50010264E-02	-7.14332227E-02	-1.55882633E-02		
1.23000E+03	2.08013950E+01	-1.06232341E+06	2.93175982E+04	-1.50090865E-02	-2.27354131E-01	-1.55954384E-02		
1.24000E+03	1.77479979E+01	-7.69561097E+05	2.92271646E+04	-1.50151922E-02	-3.83332397E-01	-1.55997355E-02		
1.24200E+03	1.69501334E+01	3.14772146E-06	7.49045588E-08	-1.50159422E-02	-4.14523562E-01	-1.50159422E-02		

\$AS001

150 SECOND BURN-BOOSTER B/O

N=5, WDSQ=0., DWOS=10.,

H=0., CODEI=1, CODEII=1,

P=0, ACC=0., BEAM=2.,

OUTST=-57., -37., -25., 0.,

25., 50., 75., 100., 125., 150., 175.,

200., 225., 250., 275., 300., 325.,

350., 375., 385., 400., 425., 450.,

475., 500., 525., 550., 575., 577.,

600., 625., 650., 675., 700., 725.,

750., 775., 800., 825., 850., 875., 900.,

925., 950., 975., 991., 1000., 1025.,

1050., 1075., 1100., 1125., 1133., 1160., 1190.,

t135,5

t=150
End Booster
Phase
Mode 1

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.29824761E+01	1.08784373E+03	2.08747824E+02	2.01811134E+02	1.34585193E+02	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	2.46026443E-02	-7.79759237E+00 2.46026443E-02
-3.70000E+01	-9.88746103E+01	-1.45202379E+04	-1.43630270E+03	2.45702024E-02	-7.30177812E+00 2.49583923E-02
-2.50000E+01	-1.84653217E+02	-3.66864817E+04	-2.25223060E+03	2.44214775E-02	-6.99465628E+00 2.57463190E-02
0.	-3.51445610E+02	-1.13143115E+05	-3.83871020E+03	2.36375696E-02	-6.35013717E+00 2.54655269E-02
2.50000E+01	-5.02286045E+02	-2.27356735E+05	-5.27341141E+03	2.26151334E-02	-5.72251392E+00 2.41218224E-02
5.00000E+01	-6.37879214E+02	-3.75607075E+05	-6.56306949E+03	2.18245705E-02	-5.12880048E+00 2.32830304E-02
7.50000E+01	-7.58930172E+02	-5.54357850E+05	-7.71442813E+03	2.11431170E-02	-4.55856930E+00 2.24965255E-02
1.00000E+02	-8.65936705E+02	-7.60214745E+05	-8.73214537E+03	2.02810563E-02	-4.30408750E+00 2.18130116E-02
1.25000E+02	-9.59330322E+02	-9.89885233E+05	-9.62034341E+03	1.91321093E-02	-3.47050019E+00 2.08198889E-02
1.50000E+02	-1.03973357E+03	-1.24020129E+06	-1.03849401E+04	1.76670428E-02	-2.96590944E+00 1.94889621E-02
1.75000E+02	-1.10811960E+03	-1.50818157E+06	-1.10353059E+04	1.68498782E-02	-2.50731755E+00 1.79534088E-02
2.00000E+02	-1.16529616E+03	-1.79107759E+06	-1.15790301E+04	1.58686300E-02	-2.06969575E+00 1.70265330E-02
2.25000E+02	-1.21184304E+03	-2.08629001E+06	-1.20216262E+04	1.47152003E-02	-1.65751051E+00 1.59173629E-02
2.50000E+02	-1.24847062E+03	-2.39137134E+06	-1.23698615E+04	1.35619866E-02	-1.27925519E+00 1.41807805E-02
2.75000E+02	-1.27616523E+03	-2.70407694E+06	-1.26331385E+04	1.27245001E-02	-9.39738265E-01 1.30594547E-02
3.00000E+02	-1.29568103E+03	-3.02238072E+06	-1.28186578E+04	1.19822550E-02	-6.24143068E-01 1.22134648E-02
3.25000E+02	-1.30755639E+03	-3.34440453E+06	-1.29315186E+04	1.13008289E-02	-3.28169084E-01 1.14775678E-02
3.50000E+02	-1.31225423E+03	-3.66838790E+06	-1.29761177E+04	1.06615726E-02	-4.97485584E-02 1.08043351E-02
3.75000E+02	-1.31022148E+03	-5.75198739E+06	-1.34971967E+04	9.79255930E-03	2.09393520E-01 9.91682142E-03
3.85000E+02	-1.30763962E+03	-5.88695594E+06	-1.34964685E+04	9.45385321E-03	3.06821795E-01 9.57060467E-03
4.00000E+02	-1.30198511E+03	-6.08898202E+06	-1.34366430E+04	8.99501279E-03	4.46780563E-01 9.10285102E-03
4.25000E+02	-1.28805172E+03	-6.42317685E+06	-1.32893150E+04	8.26225869E-03	6.65433355E-01 8.41615927E-03
4.50000E+02	-1.26887760E+03	-6.75298608E+06	-1.30865950E+04	7.45628288E-03	8.65997688E-01 7.64112179E-03
4.75000E+02	-1.24494035E+03	-7.07708664E+06	-1.28335087E+04	6.66992144E-03	1.04639700E+00 6.82885035E-03
5.00000E+02	-1.21672259E+03	-7.39428523E+06	-1.25352241E+04	6.06667980E-03	1.20893068E+00 6.20442952E-03
5.25000E+02	-1.18461976E+03	-7.70350610E+06	-1.21959006E+04	5.59779851E-03	1.35758726E+00 5.68542418E-03
5.50000E+02	-1.14894060E+03	-8.00376551E+06	-1.18187624E+04	5.08923734E-03	1.49554509E+00 5.25569878E-03
5.75000E+02	-1.10998676E+03	-8.29415519E+06	-1.14069890E+04	4.43199393E-03	1.61869927E+00 4.59265575E-03
5.77000E+02	-1.10674023E+03	-8.31693489E+06	-1.13726781E+04	4.37840973E-03	1.62783054E+00 4.53858830E-03
6.00000E+02	-1.06816250E+03	-8.57386222E+06	-1.09648928E+04	3.75175765E-03	1.72498270E+00 3.90619276E-03

t=150, 157

6.25000E+02	-1.02389988E+03	-8.84218488E+06	-1.04970075E+04	3.04941907E-03	1.81382168E+00	3.19726425E-03
6.50000E+02	-9.77640365E+02	-9.09853666E+06	-1.00080152E+04	2.32592071E-03	1.88466779E+00	2.46687868E-03
6.75000E+02	-9.29840386E+02	-9.34244991E+06	-9.50273975E+03	1.58224765E-03	1.93699557E+00	1.71608905E-03
7.00000E+02	-8.80969114E+02	-9.57357924E+06	-8.98613971E+03	8.19417733E-04	1.97031056E+00	9.45983081E-04
7.25000E+02	-8.31507791E+02	-9.79170487E+06	-8.46330121E+03	3.84716512E-05	1.98414302E+00	1.57673077E-04
7.50000E+02	-7.81949038E+02	-9.99673567E+06	-7.93943064E+03	-7.59537363E-04	1.97805190E+00	-6.47714396E-04
7.75000E+02	-7.32792949E+02	-1.01887121E+07	-7.41984737E+03	-1.54732802E-03	1.95164983E+00	-1.45220177E-03
8.00000E+02	-6.84539519E+02	-1.03678077E+07	-6.90980910E+03	-2.27080801E-03	1.90609604E+00	-2.19138492E-03
8.25000E+02	-6.37651977E+02	-1.05343228E+07	-6.41418589E+03	-2.94951567E-03	1.84277849E+00	-2.87578940E-03
8.50000E+02	-5.92558383E+02	-1.06886753E+07	-5.93754622E+03	-3.60866508E-03	1.76248231E+00	-3.54341732E-03
8.75000E+02	-5.49677390E+02	-1.08313951E+07	-5.48430062E+03	-4.23270132E-03	1.66583524E+00	-4.17730434E-03
9.00000E+02	-5.09406138E+02	-1.09608443E+07	-4.83318438E+03	-4.82261743E-03	1.55377359E+00	-4.77744748E-03
9.25000E+02	-4.72121424E+02	-1.10733472E+07	-4.17634515E+03	-5.37397548E-03	1.42710190E+00	-5.34029528E-03
9.50000E+02	-4.38172525E+02	-1.11701513E+07	-3.57824882E+03	-5.87956618E-03	1.28722247E+00	-5.85070934E-03
9.75000E+02	-4.07880552E+02	-1.12527964E+07	-3.04455493E+03	-6.38922917E-03	1.13453685E+00	-6.36467623E-03
9.91000E+02	-3.90560875E+02	-1.12990290E+07	-2.73942227E+03	-6.71726756E-03	1.03005951E+00	-6.69517544E-03
1.00000E+03	-3.81565485E+02	-1.12971433E+07	4.33881110E+03	-6.90224224E-03	9.68756501E-01	-6.93723265E-03
1.02500E+03	-3.59594437E+02	-1.09163324E+07	2.53993650E+04	-7.40839152E-03	7.86764286E-01	-7.60682406E-03
1.05000E+03	-3.42373739E+02	-1.00651247E+07	4.19078137E+04	-7.87001996E-03	5.89056192E-01	-8.19742475E-03
1.07500E+03	-3.30267620E+02	-8.86182212E+06	5.35133023E+04	-8.27990479E-03	3.77905605E-01	-8.67925779E-03
1.10000E+03	-3.23580509E+02	-7.43275150E+06	5.99258495E+04	-8.62336936E-03	1.55904116E-01	-9.06078432E-03
1.12500E+03	-3.22528395E+02	-5.91061587E+06	6.09154118E+04	-8.84584087E-03	-7.25414731E-02	-9.24804347E-03
1.13300E+03	-3.23405533E+02	-5.42653734E+06	6.00010664E+04	-8.90041905E-03	-1.46742867E-01	-9.30042616E-03
1.16000E+03	-3.30786333E+02	-3.89298914E+06	5.29951534E+04	-9.04649600E-03	-4.00752815E-01	-9.50732342E-03
1.19000E+03	-3.47114077E+02	-2.20750568E+06	5.11866592E+04	-9.14979407E-03	-6.87581755E-01	-9.53962624E-03
1.20600E+03	-3.59334953E+02	-1.42911895E+06	4.64105403E+04	-9.18221422E-03	-8.40000025E-01	-9.51371808E-03
1.21200E+03	-3.64544166E+02	-1.26955362E+06	2.63716307E+04	-9.20637749E-03	-8.96404506E-01	-9.42897815E-03
1.22500E+03	-3.77000690E+02	-9.33419624E+05	2.53186696E+04	-9.24951048E-03	-1.01998372E+00	-9.60202267E-03
1.24200E+03	-3.95766266E+02	-5.16136971E+05	2.37329614E+04	-9.28664370E-03	-1.18974543E+00	-1.06051416E-02
1.25000E+03	-4.05623037E+02	-3.29568613E+05	2.28995803E+04	-9.29688068E-03	-1.27444744E+00	-1.05690796E-02
1.26418E+03	-4.24753559E+02	-1.61093791E+04	2.12821466E+04	-9.30423709E-03	-1.42375968E+00	-1.04865730E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-2.83094768E+00		
1.26418E+03	-4.24753559E+02	-1.61093791E+04	2.00357098E+03	-9.30423709E-03	-1.42375968E+00	-9.41554659E-03
1.27500E+03	-4.40707630E+02	-1.64479423E+03	6.54633491E+02	-9.30448926E-03	-1.52523691E+00	-9.34085779E-03
1.28000E+03	-4.48450349E+02	1.09394623E-10	-1.48978048E-12	-9.30449763E-03	-1.57185076E+00	-9.30449763E-03

t1 50, /

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.29824761E+01	1.08784373E+03	8.07512953E+00	1.50118197E+01	1.41810151E+01	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-1.41417931E-02	-3.28488894E-01	-1.41417931E-02	
1.16200E+03	-6.83250667E-01	-1.84166731E+04	-9.21065750E+03	-1.41418116E-02	-3.56404159E-01	-1.39575984E-02			
1.16400E+03	-1.42397419E+00	-3.68400494E+04	-9.21274505E+03	-1.41418668E-02	-3.84319363E-01	-1.39576119E-02			
1.16600E+03	-2.22052816E+00	-5.52677582E+04	-9.21498993E+03	-1.41419589E-02	-4.12234629E-01	-1.39576591E-02			
1.16800E+03	-3.07291279E+00	-7.37001141E+04	-9.21739217E+03	-1.41420879E-02	-4.40150022E-01	-1.39577400E-02			
1.17000E+03	-3.98112839E+00	-9.21374318E+04	-9.21995174E+03	-1.41422537E-02	-4.68065612E-01	-1.39578547E-02			
1.18000E+03	-9.35969178E+00	-1.84409462E+05	-9.23514987E+03	-1.41436363E-02	-6.07648852E-01	-1.39589341E-02			
1.19000E+03	-1.61341557E+01	-2.76852742E+05	-9.25420199E+03	-1.41459425E-02	-7.47247110E-01	-1.39608584E-02			
1.20000E+03	-2.43047125E+01	-3.69506616E+05	-9.27722864E+03	-1.41491741E-02	-8.86868844E-01	-1.39636295E-02			
1.20600E+03	-2.98772830E+01	-4.25216395E+05	-9.29293353E+03	-1.41515582E-02	-9.70656678E-01	-1.39656995E-02			
1.21000E+03	-3.38747407E+01	-3.84836153E+05	1.00891171E+04	-1.41526383E-02	-1.02807271E+00	-1.43544206E-02			
1.21200E+03	-3.59595952E+01	-3.64663767E+05	1.00832415E+04	-1.41531379E-02	-1.05678194E+00	-1.43548028E-02			
1.22000E+03	-4.48732189E+01	-2.84096592E+05	1.00581207E+04	-1.41548679E-02	-1.17162559E+00	-1.43560303E-02			
1.23000E+03	-5.73072938E+01	-1.83687225E+05	1.00230784E+04	-1.41564270E-02	-1.31519081E+00	-1.43568885E-02			
1.24000E+03	-7.11770513E+01	-8.36485120E+04	9.98398996E+03	-1.41573179E-02	-1.45876087E+00	-1.43569977E-02			
1.24200E+03	-7.41232870E+01	2.59959974E-10	-3.76718770E-09	-1.41573948E-02	-1.48747180E+00	-1.41573948E-02			

t=150
End Booster
Phase
Mode 2

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.83455916E+01	2.33729623E+03	2.08747824E+02	2.13211829E+02	7.64705130E+01	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	3.41463413E-02	-8.11887261E+00 3.41463413E-02
-3.70000E+01	-1.01207244E+02	-3.22474007E+04	-3.17764407E+03	3.40741572E-02	-7.42759361E+00 3.49329799E-02
-2.50000E+01	-1.87722728E+02	-8.10952995E+04	-4.94586365E+03	3.37447369E-02	-6.99165373E+00 3.66540685E-02
0.	-3.51005606E+02	-2.47433003E+05	-8.28282195E+03	3.20218091E-02	-6.07430800E+00 3.59660100E-02
2.50000E+01	-4.91733215E+02	-4.91391107E+05	-1.11585961E+04	2.97987470E-02	-5.19586623E+00 3.29869173E-02
5.00000E+01	-6.11477426E+02	-8.01798367E+05	-1.36054715E+04	2.81004378E-02	-4.39210711E+00 3.11238759E-02
7.50000E+01	-7.11786265E+02	-1.16835645E+06	-1.56552662E+04	2.66546282E-02	-3.63974675E+00 2.94011661E-02
1.00000E+02	-7.93753323E+02	-1.58143554E+06	-1.73299591E+04	2.48501447E-02	-2.92233448E+00 2.78904884E-02
1.25000E+02	-8.58330075E+02	-2.03188894E+06	-1.86490903E+04	2.24765727E-02	-2.25048857E+00 2.57483429E-02
1.50000E+02	-9.06857891E+02	-2.51115278E+06	-1.96400616E+04	1.94904449E-02	-1.64050549E+00 2.29360697E-02
1.75000E+02	-9.41341984E+02	-3.01150888E+06	-2.03443640E+04	1.78476687E-02	-1.12312290E+00 1.98821051E-02
2.00000E+02	-9.63421174E+02	-3.52625639E+06	-2.07950688E+04	1.59024638E-02	-6.49133090E-01 1.79819707E-02
2.25000E+02	-9.74283327E+02	-4.04935000E+06	-2.10164504E+04	1.36480932E-02	-2.26793023E-01 1.57497383E-02
2.50000E+02	-9.75350701E+02	-4.57540617E+06	-2.10376364E+04	1.14246236E-02	1.29165899E-01 1.24770170E-02
2.75000E+02	-9.68491839E+02	-5.09988973E+06	-2.08968958E+04	9.83344607E-03	4.13157432E-01 1.03875057E-02
3.00000E+02	-9.55109339E+02	-5.61914292E+06	-2.06229815E+04	8.44339403E-03	6.52578181E-01 8.81537024E-03
3.25000E+02	-9.36203263E+02	-6.13009943E+06	-2.02362463E+04	7.18536802E-03	8.55709795E-01 7.46194279E-03
3.50000E+02	-9.12625027E+02	-6.63016035E+06	-1.97540656E+04	6.02178134E-03	1.02675250E+00 6.23911440E-03
3.75000E+02	-8.85259616E+02	-8.47629908E+06	1.18019810E+04	4.67225594E-03	1.15766593E+00 4.56360084E-03
3.85000E+02	-8.73465910E+02	-8.35824378E+06	1.18091241E+04	4.18227597E-03	1.20085955E+00 4.08012092E-03
4.00000E+02	-8.55027377E+02	-8.17798937E+06	1.22279978E+04	3.54811922E-03	1.25716680E+00 3.44998119E-03
4.25000E+02	-8.22634675E+02	-7.86317986E+06	1.29637348E+04	2.60766152E-03	1.33092501E+00 2.45753141E-03
4.50000E+02	-7.88702299E+02	-7.52951142E+06	1.37344311E+04	1.66625720E-03	1.38035576E+00 1.47226806E-03
4.75000E+02	-7.53838161E+02	-7.17628242E+06	1.45263255E+04	8.27785645E-04	1.40620023E+00 6.47893069E-04
5.00000E+02	-7.18551985E+02	-6.80311721E+06	1.53277005E+04	2.43435424E-04	1.41481002E+00 7.49991544E-05
5.25000E+02	-6.83206708E+02	-6.40988733E+06	1.61303681E+04	-1.68055961E-04	1.41147313E+00 -2.83950180E-04
5.50000E+02	-6.48059073E+02	-5.99663503E+06	1.69285730E+04	-5.66686473E-04	1.39829410E+00 -8.05117078E-04
5.75000E+02	-6.13410279E+02	-5.56355338E+06	1.77154837E+04	-1.03295532E-03	1.37212608E+00 -1.28246917E-03
5.77000E+02	-6.10668629E+02	-5.52806014E+06	1.77777376E+04	-1.06873479E-03	1.36952444E+00 -1.31912546E-03
6.00000E+02	-5.79559687E+02	-5.11101236E+06	1.84842350E+04	-1.46351053E-03	1.33447040E+00 -1.72385187E-03

6.25000E+02	-5.46785341E+02	-4.63954529E+06	1.92285669E+04	-1.85680324E-03	1.28624689E+00	-2.12762813E-03
6.50000E+02	-5.15337604E+02	-4.14983542E+06	1.99427502E+04	-2.21133375E-03	1.22841557E+00	-2.49221756E-03
6.75000E+02	-4.85445146E+02	-3.64270230E+06	2.06216126E+04	-2.52566305E-03	1.16197519E+00	-2.81610830E-03
7.00000E+02	-4.57310005E+02	-3.11908760E+06	2.12605592E+04	-2.79842322E-03	1.08796128E+00	-3.09786772E-03
7.25000E+02	-4.31108194E+02	-2.58004046E+06	2.18555929E+04	-3.02832675E-03	1.00744413E+00	-3.33615200E-03
7.50000E+02	-4.06988557E+02	-2.02670226E+06	2.24033334E+04	-3.21417454E-03	9.21526395E-01	-3.52971445E-03
7.75000E+02	-3.85070729E+02	-1.46029094E+06	2.29010520E+04	-3.35088779E-03	8.31556829E-01	-3.64449102E-03
8.00000E+02	-3.65431796E+02	-8.82081009E+05	2.33470121E+04	-3.43364538E-03	7.39364749E-01	-3.70200184E-03
8.25000E+02	-3.48110597E+02	-2.93378965E+05	2.37403359E+04	-3.47186287E-03	6.46199563E-01	-3.74474030E-03
8.50000E+02	-3.33124344E+02	3.04493623E+05	2.40826282E+04	-3.47166277E-03	5.52721460E-01	-3.73628506E-03
8.75000E+02	-3.20467261E+02	9.10211330E+05	2.43680245E+04	-3.43674407E-03	4.60051946E-01	-3.68288574E-03
9.00000E+02	-3.10138133E+02	1.52372321E+06	2.47259180E+04	-3.37119687E-03	3.68997731E-01	-3.60228022E-03
9.25000E+02	-3.01997883E+02	2.14588229E+06	2.50328146E+04	-3.27991567E-03	2.80306592E-01	-3.48179320E-03
9.50000E+02	-2.96066141E+02	2.77467704E+06	2.52572458E+04	-3.16810602E-03	1.94575849E-01	-3.37179349E-03
9.75000E+02	-2.92239855E+02	3.40808024E+06	2.54019818E+04	-3.02760251E-03	1.11961419E-01	-3.23245720E-03
9.91000E+02	-2.90856591E+02	3.81497144E+06	2.54542820E+04	-2.92254197E-03	6.10631001E-02	-3.12781844E-03
1.00000E+03	-2.90432681E+02	4.04681777E+06	2.61371920E+04	-2.85822787E-03	3.31770644E-02	-3.06901168E-03
1.02500E+03	-2.90540639E+02	4.70538201E+06	2.59100912E+04	-2.65959181E-03	-4.11590123E-02	-2.86201439E-03
1.05000E+03	-2.92436024E+02	5.31162284E+06	2.20011896E+04	-2.43956316E-03	-1.09690180E-01	-2.61144745E-03
1.07500E+03	-2.95960320E+02	5.77747138E+06	1.47386332E+04	-2.19953260E-03	-1.71251414E-01	-2.30952240E-03
1.10000E+03	-3.00925599E+02	6.02380680E+06	4.50759629E+03	-1.95051638E-03	-2.24946809E-01	-1.98341855E-03
1.12500E+03	-3.07135248E+02	5.98094600E+06	-8.52419853E+03	-1.75010650E-03	-2.70852655E-01	-1.69382428E-03
1.13300E+03	-3.09354815E+02	5.89301466E+06	-1.34980299E+04	-1.69292121E-03	-2.84038880E-01	-1.60293434E-03
1.16000E+03	-3.17561292E+02	5.27644103E+06	-3.09181451E+04	-1.51619552E-03	-3.22555753E-01	-1.24734209E-03
1.19000E+03	-3.27786233E+02	4.36289522E+06	-3.68664986E+04	-1.35041241E-03	-3.58077575E-01	-1.06964106E-03
1.20630E+03	-3.33646999E+02	3.72987176E+06	-4.18252365E+04	-1.27791256E-03	-3.74422956E-01	-9.79160871E-04
1.21200E+03	-3.35907239E+02	3.35518473E+06	-6.26535871E+04	-1.21446062E-03	-3.78990439E-01	-6.85607101E-04
1.22500E+03	-3.40874361E+02	2.53483170E+06	-6.35577966E+04	-1.09897887E-03	-3.85182197E-01	-2.14072533E-04
1.24200E+03	-3.47347403E+02	1.44427020E+06	-6.47381479E+04	-9.96642711E-04	-3.70741370E-01	2.59992106E-03
1.25000E+03	-3.50229174E+02	9.24250466E+05	-6.52616923E+04	-9.67926402E-04	-3.49701285E-01	2.65772317E-03
1.26418E+03	-3.54917150E+02	-7.31558657E+03	-6.61134617E+04	-9.48152305E-04	-3.11485281E-01	2.72481779E-03
1.26418000E+03 TOTAL DEFLECTION OF THE SPRING MASS SYSTEM = 4.58128370E+00						
1.26418E+03	-3.54917150E+02	-7.31558657E+03	9.17473260E+02	-9.48152305E-04	-3.11485281E-01	-9.99123042E-04
1.27500E+03	-3.58344943E+02	-7.38667825E+02	2.94743194E+02	-9.48266383E-04	-3.22110485E-01	-9.64641005E-04
1.28000E+03	-3.59967411E+02	-6.66909930E-11	1.49367672E-12	-9.48270138E-04	-3.26892868E-01	-9.48270138E-04

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.83455916E+01	2.33729623E+03	8.07512953E+00	3.61112440E+00	3.46969670E+00	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-5.82527239E-03	-2.51161406E-01	-5.82527239E-03
1.16200E+03	-5.12339708E-01	-1.88976778E+04	-9.45261074E+03	-5.82529129E-03	-2.62434010E-01	-5.63623907E-03		
1.16400E+03	-1.04848019E+00	-3.78061229E+04	-9.45585716E+03	-5.82534799E-03	-2.73706474E-01	-5.63623084E-03		
1.16600E+03	-1.60716562E+00	-5.67211974E+04	-9.45924010E+03	-5.82544251E-03	-2.84978956E-01	-5.63625771E-03		
1.16800E+03	-2.18839608E+00	-7.56431743E+04	-9.46275955E+03	-5.82557488E-03	-2.96251528E-01	-5.63631969E-03		
1.17000E+03	-2.79217184E+00	-9.45723266E+04	-9.46641552E+03	-5.82574509E-03	-3.07524258E-01	-5.63641678E-03		
1.18000E+03	-6.14924854E+00	-1.89335276E+05	-9.48674319E+03	-5.82716446E-03	-3.63892758E-01	-5.63742960E-03		
1.19000E+03	-1.00700756E+01	-2.84318569E+05	-9.51048447E+03	-5.82953253E-03	-4.27275785E-01	-5.63932284E-03		
1.20000E+03	-1.45548423E+01	-3.79556348E+05	-9.53764050E+03	-5.83285168E-03	-4.76682157E-01	-5.64209887E-03		
1.20600E+03	-1.75165052E+01	-4.36835376E+05	-9.55557388E+03	-5.83530080E-03	-5.10540862E-01	-5.64418932E-03		
1.21000E+03	-1.96070544E+01	-3.94338369E+05	1.06175837E+04	-5.83640902E-03	-5.34734260E-01	-6.04876069E-03		
1.21200E+03	-2.06886207E+01	-3.73109726E+05	1.06110346E+04	-5.83692065E-03	-5.46832167E-01	-6.04914134E-03		
1.22000E+03	-2.52568649E+01	-2.88330532E+05	1.05833731E+04	-5.83868439E-03	-5.95230472E-01	-6.05035186E-03		
1.23000E+03	-3.15117040E+01	-1.82683118E+05	1.05454990E+04	-5.84025423E-03	-6.55738701E-01	-6.05116421E-03		
1.24000E+03	-3.83716531E+01	-7.74327656E+04	1.05039608E+04	-5.84112105E-03	-7.16251169E-01	-6.05120027E-03		
1.24200E+03	-3.98162577E+01	-6.74717581E-11	9.81430753E-10	-5.84119143E-03	-7.28350334E-01	-5.84119143E-03		

t=150
End Booster
Phase
Mode 3

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.95059058E+01	3.54095283E+03	2.08747824E+02	1.39191723E+02	1.20477984E+02	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.			4.66368445E-02	-9.50133023E+00	4.66368445E-02
-3.70000E+01	-1.17065811E+02	-5.68918469E+04	-5.59138930E+03			4.65093317E-02	-8.55385975E+00	4.80225180E-02
-2.50000E+01	-2.16078731E+02	-1.42608909E+05	-8.65731632E+03			4.59292210E-02	-7.94829364E+00	5.10217600E-02
0.	-3.98757236E+02	-4.31806509E+05	-1.43132905E+04			4.29116437E-02	-6.67213649E+00	4.97274963E-02
2.50000E+01	-5.50225308E+02	-8.50210067E+05	-1.90023321E+04			3.90483711E-02	-5.46634219E+00	4.44776089E-02
5.00000E+01	-6.73264681E+02	-1.37461233E+06	-2.28110125E+04			3.61230726E-02	-4.39151555E+00	4.11921865E-02
7.50000E+01	-7.70583459E+02	-1.98412949E+06	-2.58236693E+04			3.36555692E-02	-3.40637762E+00	3.81860375E-02
1.00000E+02	-8.44093962E+02	-2.65964660E+06	-2.80985139E+04			3.06066877E-02	-2.48273541E+00	3.55362515E-02
1.25000E+02	-8.95462448E+02	-3.38333278E+06	-2.96874072E+04			2.66353967E-02	-1.63826264E+00	3.18437138E-02
1.50000E+02	-9.26999363E+02	-4.13889027E+06	-3.06618648E+04			2.16892342E-02	-8.99579268E-01	2.70685088E-02
1.75000E+02	-9.42050040E+02	-4.91219466E+06	-3.11267644E+04			1.89960348E-02	-3.12723869E-01	2.21087112E-02
2.00000E+02	-9.43315792E+02	-5.69166723E+06	-3.11646705E+04			1.58401697E-02	2.01642672E-01	1.89566368E-02
2.25000E+02	-9.32766310E+02	-6.46737516E+06	-3.08365676E+04			1.22209993E-02	6.30940115E-01	1.53046561E-02
2.50000E+02	-9.12720345E+02	-7.23103565E+06	-3.02144269E+04			8.68710689E-03	9.53790834E-01	1.01985630E-02
2.75000E+02	-8.86104995E+02	-7.97641993E+06	-2.93890652E+04			6.18512764E-03	1.16554801E+00	6.96434832E-03
3.00000E+02	-8.55087855E+02	-8.69936022E+06	-2.84277624E+04			4.02192324E-03	1.30830577E+00	4.53467410E-03
3.25000E+02	-8.21213959E+02	-9.39707418E+06	-2.73781603E+04			2.08380428E-03	1.39516503E+00	2.45798970E-03
3.50000E+02	-7.85789820E+02	-1.00678702E+07	-2.62806515E+04			3.08483504E-04	1.43299088E+00	5.97621671E-04
3.75000E+02	-7.50163621E+02	-9.25872687E+06	3.99870922E+04			-1.24260279E-03	1.41141303E+00	-1.61074450E-03
3.85000E+02	-7.36141724E+02	-8.85879148E+06	3.99999579E+04			-1.76999095E-03	1.39274174E+00	-2.11601135E-03
4.00000E+02	-7.15522750E+02	-8.25344652E+06	4.07095545E+04			-2.42677725E-03	1.35600814E+00	-2.75349920E-03
4.25000E+02	-6.82604295E+02	-7.22140196E+06	4.18422491E+04			-3.33501729E-03	1.27409473E+00	-3.81958300E-03
4.50000E+02	-6.52041478E+02	-6.16201031E+06	4.28938787E+04			-4.15332323E-03	1.16764385E+00	-4.75916897E-03
4.75000E+02	-6.24414932E+02	-5.07755291E+06	4.38445074E+04			-4.79680512E-03	1.04072665E+00	-5.33977115E-03
5.00000E+02	-6.00108208E+02	-3.97073945E+06	4.46807932E+04			-5.17703124E-03	9.02780572E-01	-5.66802897E-03
5.25000E+02	-5.79329567E+02	-2.84452625E+06	4.53956495E+04			-5.39081814E-03	7.59051673E-01	-5.71697891E-03
5.50000E+02	-5.62189976E+02	-1.70199600E+06	4.59853188E+04			-5.53217253E-03	6.09713339E-01	-6.17985308E-03
5.75000E+02	-5.48892272E+02	-5.46364986E+05	4.64428114E+04			-5.62290912E-03	4.53804161E-01	-6.27703322E-03
5.77000E+02	-5.47997221E+02	-4.53448429E+05	4.64736016E+04			-5.62613436E-03	4.41246334E-01	-6.28069212E-03
6.00000E+02	-5.39511460E+02	6.19020730E+05	4.67655173E+04			-5.62003367E-03	2.96657689E-01	-6.27870292E-03

6.25000E+02	-5.34048574E+02	1.79078674E+06	4.69534015E+04	-5.52289557E-03	1.40670452E-01	-6.18421109E-03
6.50000E+02	-5.32444518E+02	2.96558359E+06	4.70084964E+04	-5.33111570E-03	-1.17485073E-02	-5.99320720E-03
6.75000E+02	-5.34579911E+02	4.14013857E+06	4.69349088E+04	-5.04458227E-03	-1.58185103E-01	-5.70563732E-03
7.00000E+02	-5.40275036E+02	5.31130757E+06	4.67388210E+04	-4.66344261E-03	-2.96227526E-01	-5.32173586E-03
7.25000E+02	-5.49289989E+02	6.47612693E+06	4.64284861E+04	-4.18809067E-03	-4.23473305E-01	-4.84201301E-03
7.50000E+02	-5.61324992E+02	7.63186513E+06	4.60142168E+04	-3.61915040E-03	-5.37536001E-01	-4.26723796E-03
7.75000E+02	-5.76022346E+02	8.77607412E+06	4.55084117E+04	-2.97969136E-03	-6.35725454E-01	-3.56313254E-03
8.00000E+02	-5.92953963E+02	9.90664564E+06	4.49257369E+04	-2.32256384E-03	-7.16320646E-01	-2.83895162E-03
8.25000E+02	-6.11670451E+02	1.10218491E+07	4.42815703E+04	-1.64298009E-03	-7.78859243E-01	-2.15196366E-03
8.50000E+02	-6.31727051E+02	1.21203401E+07	4.35913614E+04	-9.24359453E-04	-8.23183722E-01	-1.40338540E-03
8.75000E+02	-6.52653809E+02	1.32011673E+07	4.28712379E+04	-1.90476042E-04	-8.48259354E-01	-6.23518850E-04
9.00000E+02	-6.73965448E+02	1.42598788E+07	4.17464183E+04	5.52498198E-04	-8.53874003E-01	1.62344756E-04
9.25000E+02	-6.95171254E+02	1.52882938E+07	4.05301484E+04	1.29118715E-03	-8.39769242E-01	9.64331119E-04
9.50000E+02	-7.15779961E+02	1.62866721E+07	3.93480175E+04	2.00891199E-03	-8.06663982E-01	1.69158926E-03
9.75000E+02	-7.35328537E+02	1.72562004E+07	3.82266347E+04	2.77135621E-03	-7.54821216E-01	2.46307690E-03
9.91000E+02	-7.47062102E+02	1.78623885E+07	3.75535313E+04	3.28219816E-03	-7.11304908E-01	2.97934710E-03
1.00000E+03	-7.53336301E+02	1.81401623E+07	2.14518093E+04	3.57698467E-03	-6.82682130E-01	3.40398621E-03
1.02500E+03	-7.69195427E+02	1.80412402E+07	-2.80583138E+04	4.40282834E-03	-5.82120144E-01	4.62203391E-03
1.05000E+03	-7.82173265E+02	1.68122285E+07	-6.85806710E+04	5.17086339E-03	-4.52734797E-01	5.70664988E-03
1.07500E+03	-7.91600924E+02	1.47047262E+07	-9.80169983E+04	5.85432326E-03	-2.98685075E-01	6.58579339E-03
1.10000E+03	-7.96924286E+02	1.20182037E+07	-1.14648635E+05	6.41819914E-03	-1.25154495E-01	7.25505049E-03
1.12500E+03	-7.97766592E+02	9.08916929E+06	-1.17232917E+05	6.77041630E-03	5.90766359E-02	7.54446318E-03
1.13300E+03	-7.97051303E+02	8.15991388E+06	-1.14806444E+05	6.85345543E-03	1.19745673E-01	7.61883172E-03
1.16000E+03	-7.91000077E+02	5.29046989E+06	-9.61191395E+04	7.06373166E-03	3.29542050E-01	7.89955027E-03
1.19000E+03	-7.77323786E+02	6.74209200E+05	-1.40212854E+05	7.16333766E-03	5.80964766E-01	8.23118390E-03
1.20600E+03	-7.66984225E+02	-1.45741674E+06	-1.27058712E+05	7.15605648E-03	7.11298319E-01	8.06361871E-03
1.21200E+03	-7.62590591E+02	-1.33988455E+06	2.01990680E+04	7.13099519E-03	7.53246074E-01	6.96049660E-03
1.22500E+03	-7.52217594E+02	-1.05908288E+06	2.30545196E+04	7.08385416E-03	8.42599610E-01	6.76286576E-03
1.24200E+03	-7.36961665E+02	-6.32157948E+05	2.72563885E+04	7.04008824E-03	9.49775264E-01	5.52584443E-03
1.25000E+03	-7.29188740E+02	-4.05613633E+05	2.93957184E+04	7.02747527E-03	9.93456072E-01	5.39437980E-03
1.26418E+03	-7.14570244E+02	3.94023711E+04	3.34196758E+04	7.01939104E-03	1.06830261E+00	5.16274239E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-1.72869305E+00		
1.26418E+03	-7.14570244E+02	3.94023711E+04	-4.89916478E+03	7.01939104E-03	1.06830261E+00	7.29156686E-03
1.27500E+03	-7.02589665E+02	4.02419280E+03	-1.60157640E+03	7.02000791E-03	1.14622226E+00	7.10898437E-03
1.28000E+03	-6.96770244E+02	-2.46499250E-08	-7.34781925E-11	7.02002839E-03	1.18154594E+00	7.02002839E-03

5
BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.95059058E+01	3.54095283E+03	8.07512953E+00	7.76312299E+01	6.95536307E+01	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	0.	0.	4.40222654E-02	-2.75681548E-01	4.40222654E-02
1.16200E+03	-4.64786778E-01	1.42325135E+05	7.11568962E+04	4.40224077E-02	-1.90483425E-01	4.25992698E-02		
1.16400E+03	-7.60554788E-01	2.84635953E+05	7.11541830E+04	4.40228347E-02	-1.05284447E-01	4.25997510E-02		
1.16600E+03	-8.85923697E-01	4.26942909E+05	7.11530329E+04	4.40235463E-02	-2.00842522E-02	4.26004856E-02		
1.16800E+03	-8.40890567E-01	5.69249127E+05	7.11534460E+04	4.40245425E-02	6.51176647E-02	4.26014736E-02		
1.17000E+03	-6.25451447E-01	7.11557735E+05	7.11554223E+04	4.40258233E-02	1.50321811E-01	4.26027148E-02		
1.18000E+03	3.00804334E+00	1.42324605E+06	7.11887540E+04	4.40364970E-02	5.76393715E-01	4.26127219E-02		
1.19000E+03	1.09028635E+01	2.13546312E+06	7.12611768E+04	4.40542900E-02	1.00259737E+00	4.26290664E-02		
1.20000E+03	2.30606435E+01	2.84859993E+06	7.13727056E+04	4.40792093E-02	1.42899619E+00	4.26517552E-02		
1.20600E+03	3.24024497E+01	3.27708621E+06	7.14584022E+04	4.40975861E-02	1.68495557E+00	4.26684181E-02		
1.21000E+03	3.95068218E+01	2.98348548E+06	-7.33655920E+04	4.41059335E-02	1.86723488E+00	4.55732454E-02		
1.21200E+03	4.33324403E+01	2.83678911E+06	-7.33304979E+04	4.41098137E-02	1.95838459E+00	4.55764236E-02		
1.22000E+03	6.04580841E+01	2.25075569E+06	-7.31733966E+04	4.41233799E-02	2.32304012E+00	4.55868478E-02		
1.23000E+03	8.59679834E+01	1.52015694E+06	-7.29393828E+04	4.41359483E-02	2.77895279E+00	4.55947360E-02		
1.24000E+03	1.16037308E+02	7.92107452E+05	-7.26635432E+04	4.41436543E-02	3.23491584E+00	4.55969252E-02		
1.24200E+03	1.22598334E+02	-5.24895416E-09	2.14997251E-09	4.41443977E-02	3.32608763E+00	4.41443977E-02		

t=150
End Booster
Phase
Mode 4

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION			
7.91754873E+01	6.26875779E+03	2.08747824E+02	1.03783820E+02	8.92307267E+01	0.				
STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.			3.61191384E-02	-5.90977836E+00	3.61191384E-02	
-3.70000E+01	-7.13368951E+01	-6.21135867E+04	-6.07640854E+03			3.59796090E-02	-5.17131270E+00	3.76218815E-02	
-2.50000E+01	-1.30494361E+02	-1.54807720E+05	-9.31971525E+03			3.53482972E-02	-4.68826497E+00	4.08304827E-02	
0.	-2.34870475E+02	-4.62238633E+05	-1.50409111E+04			3.20965965E-02	-3.66907575E+00	3.92589351E-02	
2.50000E+01	-3.14575209E+02	-8.95563091E+05	-1.94085855E+04			2.79934247E-02	-2.73011568E+00	3.35387348E-02	
5.00000E+01	-3.72662268E+02	-1.42283906E+06	-2.25910317E+04			2.49381742E-02	-1.93255096E+00	2.99584035E-02	
7.50000E+01	-4.12041168E+02	-2.01658021E+06	-2.47486960E+04			2.24061949E-02	-1.23084074E+00	2.67480714E-02	
1.00000E+02	-4.34761771E+02	-2.65265272E+06	-2.59919956E+04			1.93377364E-02	-5.95705725E-01	2.38977356E-02	
1.25000E+02	-4.42611409E+02	-3.30937114E+06	-2.64194820E+04			1.54165202E-02	-4.42630469E-02	2.00515170E-02	
1.50000E+02	-4.37993403E+02	-3.96791583E+06	-2.61628891E+04			1.06281231E-02	3.98634762E-01	1.52181037E-02	
1.75000E+02	-4.24186163E+02	-4.61335871E+06	-2.54042060E+04			8.07323037E-03	6.97746490E-01	1.06136510E-02	
2.00000E+02	-4.03772443E+02	-5.23510173E+06	-2.42831148E+04			5.14074936E-03	9.25866638E-01	7.56906084E-03	
2.25000E+02	-3.78653348E+02	-5.82535883E+06	-2.29038364E+04			1.84723369E-03	1.07297416E+00	4.13761733E-03	
2.50000E+02	-3.50994063E+02	-6.37912233E+06	-2.13854290E+04			-1.30532907E-03	1.12380088E+00	-2.35537583E-04	
2.75000E+02	-3.23323107E+02	-6.89465277E+06	-1.98667555E+04			-3.49071395E-03	1.08152332E+00	-2.96396747E-03	
3.00000E+02	-2.97462689E+02	-7.37329767E+06	-1.84478290E+04			-5.34253318E-03	9.80980560E-01	-5.00979013E-03	
3.25000E+02	-2.74712824E+02	-7.81847015E+06	-1.71996309E+04			-6.97016517E-03	8.33658737E-01	-6.73509272E-03	
3.50000E+02	-2.56159191E+02	-8.23519920E+06	-1.61815817E+04			-8.43470800E-03	6.45909637E-01	-8.25667920E-03	
3.75000E+02	-2.42769609E+02	-6.61743808E+05	-3.58525895E+04			-8.48376535E-03	4.24865540E-01	-8.81384270E-03	
3.85000E+02	-2.38960146E+02	1.02030182E+06	3.58587755E+04			-8.43489843E-03	3.37058932E-01	-8.74509545E-03	
4.00000E+02	-2.34882265E+02	1.56019413E+06	3.61070276E+04			-8.33666419E-03	2.06746707E-01	-8.62644772E-03	
4.25000E+02	-2.32394936E+02	2.46544012E+06	3.62583578E+04			-8.10192284E-03	-7.14354155E-03	-8.52182276E-03	
4.50000E+02	-2.35196761E+02	3.37042597E+06	3.60875084E+04			-7.74462466E-03	-2.16278966E-01	-8.25433523E-03	
4.75000E+02	-2.43124198E+02	4.26720853E+06	3.56043515E+04			-7.31253320E-03	-4.16270937E-01	-7.75345396E-03	
5.00000E+02	-2.55900586E+02	5.14818395E+06	3.48259835E+04			-6.92146646E-03	-6.34298529E-01	-7.30416957E-03	
5.25000E+02	-2.73241898E+02	6.00619186E+06	3.37696653E+04			-6.57597135E-03	-7.81550995E-01	-6.81860121E-03	
5.50000E+02	-2.94898548E+02	6.83448183E+06	3.24504300E+04			-6.15727798E-03	-9.50931589E-01	-6.61432629E-03	
5.75000E+02	-3.20669530E+02	7.62661899E+06	3.08804624E+04			-5.57390527E-03	-1.10886134E+00	-6.00884136E-03	
6.00000E+02	-3.22899219E+02	7.68824436E+06	3.07446708E+04			-5.52450234E-03	-1.12082777E+00	-5.95752587E-03	
6.25000E+02	-3.50193256E+02	8.37659997E+06	2.90819868E+04			-4.92831197E-03	-1.25082818E+00	-5.33791741E-03	

t=150, 400

6.25000E+02	-3.83047675E+02	9.07902609E+06	2.70805278E+04	-4.22411976E-03	-1.37524493E+00	-4.60553565E-03
6.50000E+02	-4.18776816E+02	9.72916636E+06	2.49039484E+04	-3.46535916E-03	-1.48062955E+00	-3.81611900E-03
6.75000E+02	-4.56887624E+02	1.03230138E+07	2.25822809E+04	-2.65641339E-03	-1.56561554E+00	-2.97447369E-03
7.00000E+02	-4.96854399E+02	1.08573376E+07	2.01475449E+04	-1.80195784E-03	-1.62896064E+00	-2.08572608E-03
7.25000E+02	-5.38122026E+02	1.13297301E+07	1.76335518E+04	-9.06895575E-04	-1.66955409E+00	-1.15525546E-03
7.50000E+02	-5.80109323E+02	1.17386493E+07	1.50757007E+04	2.37108239E-05	-1.68642203E+00	-1.88622989E-04
7.75000E+02	-6.22216283E+02	1.20834558E+07	1.25107758E+04	9.53642637E-04	-1.67872586E+00	7.93248075E-04
8.00000E+02	-6.63833893E+02	1.23644378E+07	9.97568554E+03	1.81433384E-03	-1.64758164E+00	1.69967079E-03
8.25000E+02	-7.04394196E+02	1.25827765E+07	7.50484234E+03	2.62464264E-03	-1.59463360E+00	2.53838008E-03
8.50000E+02	-7.43372347E+02	1.27404847E+07	5.13052640E+03	3.41137629E-03	-1.52089455E+00	3.35499688E-03
8.75000E+02	-7.80256776E+02	1.28403665E+07	2.88379586E+03	4.15340253E-03	-1.42723862E+00	4.12427328E-03
9.00000E+02	-8.14565009E+02	1.28748032E+07	-3.11565368E+02	4.84985354E-03	-1.31488526E+00	4.85276536E-03
9.25000E+02	-8.45840360E+02	1.28266361E+07	-3.48679966E+03	5.49337853E-03	-1.18490792E+00	5.52149788E-03
9.50000E+02	-8.73666554E+02	1.27033812E+07	-6.31202064E+03	6.07387377E-03	-1.03931159E+00	6.12477716E-03
9.75000E+02	-8.97665433E+02	1.25142727E+07	-8.74874822E+03	6.64723305E-03	-8.78754774E-01	6.71778747E-03
9.91000E+02	-9.10844988E+02	1.23633478E+07	-1.00869732E+04	7.00914125E-03	-7.68280791E-01	7.09048781E-03
1.00000E+03	-9.17465497E+02	1.21598136E+07	-4.00402147E+04	7.21019594E-03	-7.02649921E-01	7.53310090E-03
1.02500E+03	-9.32531525E+02	1.00592970E+07	-1.23310019E+05	7.72241945E-03	-4.98875895E-01	8.68577897E-03
1.05000E+03	-9.42186749E+02	6.24387950E+06	-1.76681020E+05	8.08482412E-03	-2.71128026E-01	9.46514459E-03
1.07500E+03	-9.45964171E+02	1.49663136E+06	-1.97558415E+05	8.25447975E-03	-3.03761401E-02	9.72879629E-03
1.10000E+03	-9.43689270E+02	-3.35486806E+06	-1.84988211E+05	8.21515948E-03	2.11746915E-01	9.56543839E-03
1.12500E+03	-9.35499108E+02	-7.47773375E+06	-1.38722603E+05	8.03375978E-03	4.41888968E-01	8.94969533E-03
1.13300E+03	-9.31681059E+02	-8.49798318E+06	-1.15773200E+05	7.95675726E-03	5.12623171E-01	8.72857859E-03
1.16000E+03	-9.14770685E+02	-1.03029527E+07	-2.05717727E+04	7.65503782E-03	7.36791946E-01	7.83392280E-03
1.19000E+03	-8.89983024E+02	-4.16854447E+06	2.46711395E+05	7.39965504E-03	9.12442822E-01	5.52072719E-03
1.20600E+03	-8.74689086E+02	7.81472825E+04	2.81339331E+05	7.36217228E-03	9.99141171E-01	5.35260563E-03
1.21200E+03	-8.68559695E+02	-8.79939789E+03	-1.29870380E+04	7.36276656E-03	1.04398917E+00	7.47238903E-03
1.22500E+03	-8.54357358E+02	-1.33318365E+05	-6.06733760E+03	7.35968613E-03	1.14098573E+00	7.44416175E-03
1.24200E+03	-8.33893770E+02	-1.53176947E+05	3.90390003E+03	7.35159675E-03	1.26594822E+00	7.13471341E-03
1.25000E+03	-8.23542378E+02	-1.01914998E+05	8.94792870E+03	7.34842336E-03	1.32189959E+00	6.85131621E-03
1.26418E+03	-8.04133824E+02	9.12726441E+04	1.84075469E+04	7.34771489E-03	1.41535271E+00	6.32507340E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-7.59142213E-01		
1.26418E+03	-8.04133824E+02	9.12726441E+04	-1.13830335E+04	7.34771489E-03	1.41535271E+00	7.98010564E-03
1.27500E+03	-7.88364903E+02	9.28344371E+03	-3.69824992E+03	7.34914184E-03	1.49942008E+00	7.55460017E-03
1.28000E+03	-7.80774649E+02	-6.64938795E-11	-1.28689922E-11	7.34918908E-03	1.53668171E+00	7.34918908E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.91754873E+01	6.26875779E+03	8.07512953E+00	1.13039133E+02	9.14940884E+01	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
1.16000E+03	0.	0.	0.	-7.18281025E-02	2.18324144E+00 -7.18281025E-02
1.16200E+03	4.21803395E+00	-3.06058159E+05	-1.52943711E+05	-7.18284086E-02	2.04570619E+00 -6.87695344E-02
1.16400E+03	8.17190577E+00	-6.11880625E+05	-1.52879499E+05	-7.18293266E-02	1.90816501E+00 -6.87717366E-02
1.16600E+03	1.18506965E+01	-9.17579134E+05	-1.52819754E+05	-7.18308561E-02	1.77061890E+00 -6.87744610E-02
1.16800E+03	1.52543771E+01	-1.22316262E+06	-1.52764478E+05	-7.18329968E-02	1.63306681E+00 -6.87777073E-02
1.17000E+03	1.83829527E+01	-1.52864002E+06	-1.52713669E+05	-7.18357487E-02	1.49550772E+00 -6.87814753E-02
1.18000E+03	2.98985646E+01	-3.05474852E+06	-1.52526651E+05	-7.18586672E-02	8.07570527E-01 -6.88081341E-02
1.19000E+03	3.45332539E+01	-4.57954554E+06	-1.52451383E+05	-7.18968393E-02	1.19301642E-01 -6.88478116E-02
1.20000E+03	3.22830530E+01	-6.10414888E+06	-1.52487927E+05	-7.19502574E-02	-5.69429070E-01 -6.89004989E-02
1.20600E+03	2.76260474E+01	-7.01928319E+06	-1.52563558E+05	-7.19896275E-02	-9.82943293E-01 -6.89383563E-02
1.21000E+03	2.30953424E+01	-6.44521224E+06	1.43477828E+05	-7.20075801E-02	-1.28241964E+00 -7.48771366E-02
1.21200E+03	2.03807434E+01	-6.15829986E+06	1.43433743E+05	-7.20159824E-02	-1.43218151E+00 -7.48846573E-02
1.22000E+03	6.52669073E+00	-5.01167799E+06	1.43208749E+05	-7.20457682E-02	-2.03136503E+00 -7.49099432E-02
1.23000E+03	-1.75328548E+01	-3.58144278E+06	1.42818014E+05	-7.20744098E-02	-2.78057857E+00 -7.49307701E-02
1.24000E+03	-4.90853771E+01	-2.15572334E+06	1.42305592E+05	-7.20935308E-02	-3.52994058E+00 -7.49396427E-02
1.24200E+03	-5.62951375E+01	8.68239954E-10	7.89416783E-10	-7.20955910E-02	-3.67977742E+00 -7.20955910E-02

t150,4

t=150
End Booster
Phase
Mode 5

Atlas SLV3A/Burner 2

BEAM 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.08539858E+02	1.17809007E+04	2.08747824E+02	2.11924196E+02	8.48602528E+01	0.
STATION IN	INTG. PHI DX	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PRIME 1/IN
-5.70000E+01	0.	0.	0.	-6.82591811E-02	8.63169136E+00 -6.82591811E-02
-3.70000E+01	1.00931550E+02	1.68290544E+05	1.63451965E+04	-6.78798261E-02	7.22294528E+00 -7.22974468E-02
-2.50000E+01	1.81898839E+02	4.15671277E+05	2.46892483E+04	-6.61779666E-02	6.27160287E+00 -8.07010538E-02
0.	3.13369536E+02	1.21300170E+06	3.82319511E+04	-5.75505214E-02	4.26803366E+00 -7.57562124E-02
2.50000E+01	3.97162431E+02	2.28623359E+06	4.68570402E+04	-4.69252945E-02	2.49653694E+00 -6.03130203E-02
5.00000E+01	4.41618355E+02	3.52230998E+06	5.14287839E+04	-3.92404997E-02	1.10086963E+00 -5.06691183E-02
7.50000E+01	4.54402145E+02	4.83055112E+06	5.27417749E+04	-3.30689663E-02	-4.47908230E-02 -4.23219093E-02
1.00000E+02	4.40875778E+02	6.13675619E+06	5.13384139E+04	-2.58497712E-02	-1.01401607E+00 -3.48565105E-02
1.25000E+02	4.05699909E+02	7.37882367E+06	4.77021838E+04	-1.69479566E-02	-1.77030027E+00 -2.53167608E-02
1.50000E+02	3.54822132E+02	8.50832946E+06	4.24460282E+04	-6.48145266E-03	-2.26442378E+00 -1.39281243E-02
1.75000E+02	2.95544210E+02	9.49409945E+06	3.63319124E+04	-1.11599995E-03	-2.45919149E+00 -4.74919119E-03
2.00000E+02	2.33335382E+02	1.03223914E+07	2.99151117E+04	4.78972793E-03	-2.49712623E+00 1.79821676E-03
2.25000E+02	1.72278810E+02	1.09908305E+07	2.36164049E+04	1.11407654E-02	-2.36566775E+00 8.77912487E-03
2.50000E+02	1.16729780E+02	1.15079360E+07	1.78864068E+04	1.69676672E-02	-2.05268119E+00 1.60729120E-02
2.75000E+02	7.09970031E+01	1.18936635E+07	1.31695727E+04	2.08257375E-02	-1.59241800E+00 2.04765599E-02
3.00000E+02	3.79930182E+01	1.21773738E+07	9.76542477E+03	2.39528271E-02	-1.03769100E+00 2.37766883E-02
3.25000E+02	1.98109000E+01	1.23946760E+07	7.88885042E+03	2.65869558E-02	-4.08503110E-01 2.64791365E-02
3.50000E+02	1.81522544E+01	1.25860123E+07	7.71485221E+03	2.88663881E-02	2.82952517E-01 2.87815098E-02
3.75000E+02	3.35063949E+01	-3.75902454E+07	5.65926082E+04	2.33001902E-02	9.25484658E-01 2.27791695E-02
3.85000E+02	4.38509022E+01	-3.70241668E+07	5.66242200E+04	2.11284803E-02	1.14246137E+00 2.06386514E-02
4.00000E+02	6.31619370E+01	-3.61588138E+07	5.88386819E+04	1.83218300E-02	1.43037525E+00 1.78496094E-02
4.25000E+02	1.03990571E+02	-3.46317073E+07	6.35160363E+04	1.41710227E-02	1.82116988E+00 1.34354577E-02
4.50000E+02	1.53237787E+02	-3.29749857E+07	6.91568585E+04	1.00357714E-02	2.10387217E+00 9.05897957E-03
4.75000E+02	2.08204806E+02	-3.11684205E+07	7.54532048E+04	6.37703550E-03	2.28221096E+00 5.44263049E-03
5.00000E+02	2.66650110E+02	-2.91990511E+07	8.21453541E+04	3.85226239E-03	2.38523320E+00 2.94956619E-03
5.25000E+02	3.26995112E+02	-2.70593663E+07	8.90538212E+04	2.09900133E-03	2.43666640E+00 1.45916329E-03
5.50000E+02	3.88134892E+02	-2.47455704E+07	9.60537685E+04	4.36793956E-04	2.44488281E+00 -9.16076024E-04
5.75000E+02	4.48731265E+02	-2.22572084E+07	1.02992155E+05	-1.45964535E-03	2.39663174E+00 -2.91023907E-03
5.77000E+02	4.53518558E+02	-2.20506760E+07	1.03540075E+05	-1.60257459E-03	2.39066039E+00 -3.06088550E-03
6.00000E+02	5.07526504E+02	-1.95976916E+07	1.09723620E+05	-3.14847412E-03	2.30112542E+00 -4.69387722E-03

6.25000E+02	5.63398788E+02	-1.67738191E+07	1.16120668E+05	-4.61614225E-03	2.16382040E+00	-6.25164462E-03
6.50000E+02	6.15379483E+02	-1.37953781E+07	1.22071954E+05	-5.84977120E-03	1.99754618E+00	-7.56909450E-03
6.75000E+02	6.62646053E+02	-1.06747263E+07	1.27483317E+05	-6.83737825E-03	1.78747964E+00	-8.63291793E-03
7.00000E+02	7.04534390E+02	-7.42635092E+06	1.32278731E+05	-7.56806617E-03	1.56111403E+00	-9.43114689E-03
7.25000E+02	7.40546285E+02	-4.06640398E+06	1.36401160E+05	-8.03217637E-03	1.31822326E+00	-9.95331946E-03
7.50000E+02	7.70355958E+02	-6.12218193E+05	1.39813303E+05	-8.22140378E-03	1.06582263E+00	-1.01906052E-02
7.75000E+02	7.93819417E+02	2.91819590E+06	1.42498727E+05	-8.13511768E-03	8.12364360E-01	-9.96202444E-03
8.00000E+02	8.11045002E+02	6.50676734E+06	1.44469928E+05	-7.80526538E-03	5.67401948E-01	-9.46583926E-03
8.25000E+02	8.22327196E+02	1.01360215E+07	1.45760413E+05	-7.26508962E-03	3.36815953E-01	-8.94049666E-03
8.50000E+02	8.28050132E+02	1.37894788E+07	1.46414565E+05	-6.52274779E-03	1.23673012E-01	-8.13169905E-03
8.75000E+02	8.28723429E+02	1.74519242E+07	1.46490677E+05	-5.61844888E-03	-6.61414078E-02	-7.09815269E-03
9.00000E+02	8.24981871E+02	2.11075767E+07	1.45807176E+05	-4.57635198E-03	-2.28920717E-01	-5.93903586E-03
9.25000E+02	8.17543647E+02	2.47363077E+07	1.44386001E+05	-3.43200880E-03	-3.61167713E-01	-4.59641203E-03
9.50000E+02	8.07217083E+02	2.83222904E+07	1.42413114E+05	-2.22594460E-03	-4.61150938E-01	-3.37443745E-03
9.75000E+02	7.94792275E+02	3.18536186E+07	1.40039565E+05	-8.58085370E-04	-5.28514178E-01	-1.98743670E-03
9.91000E+02	7.86134583E+02	3.40811192E+07	1.38385770E+05	1.01029467E-04	-5.52620738E-01	-1.01498481E-03
1.00000E+03	7.81134400E+02	3.51672568E+07	9.54797873E+04	6.68192085E-04	-5.57931802E-01	-1.01806200E-04
1.02500E+03	7.67476981E+02	3.57610135E+07	-4.65866843E+04	2.29138723E-03	-5.25764985E-01	2.65534570E-03
1.05000E+03	7.55463875E+02	3.29806641E+07	-1.71588968E+05	3.81031665E-03	-4.27517460E-01	5.15085546E-03
1.07500E+03	7.46626328E+02	2.74582951E+07	-2.63529214E+05	5.12436206E-03	-2.73346095E-01	7.09099799E-03
1.10000E+03	7.42182899E+02	2.01858080E+07	-3.09823396E+05	6.13159496E-03	-7.82250174E-02	8.39307961E-03
1.12500E+03	7.42846836E+02	1.24123651E+07	-3.02488239E+05	6.67620028E-03	1.33156160E-01	8.67342154E-03
1.13300E+03	7.44190245E+02	1.00489496E+07	-2.87319275E+05	6.78429636E-03	2.02696104E-01	8.69975819E-03
1.16000E+03	7.52849928E+02	3.44813897E+06	-1.97430763E+05	6.99070734E-03	4.38854847E-01	8.70749659E-03
1.19000E+03	7.69485515E+02	1.47094431E+06	-1.14327150E+04	7.06469522E-03	6.66254637E-01	7.15176557E-03
1.20600E+03	7.81040549E+02	1.70769692E+06	3.75957173E+04	7.09194187E-03	7.77787892E-01	6.82340103E-03
1.21200E+03	7.85842059E+02	1.41210521E+06	-4.70466350E+04	7.11984102E-03	8.22715595E-01	7.51695761E-03
1.22500E+03	7.97178659E+02	8.66684468E+05	-3.66687231E+04	7.16406242E-03	9.21376588E-01	7.67460156E-03
1.24200E+03	8.13982128E+02	3.71052390E+05	-2.12908042E+04	7.19474652E-03	1.05701534E+00	8.37756898E-03
1.25000E+03	8.22699431E+02	2.32342469E+05	-1.33069895E+04	7.20193100E-03	1.12231039E+00	7.94120819E-03
1.26418E+03	8.39372865E+02	1.50328439E+05	1.97021880E+03	7.20939134E-03	1.22904708E+00	7.09993474E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =			-2.80406043E-01		
1.26418E+03	8.39372865E+02	1.50328439E+05	-1.87092890E+04	7.20939134E-03	1.22904708E+00	8.24879629E-03
1.27500E+03	8.53133830E+02	1.53287176E+04	-6.10332717E+03	7.21174379E-03	1.31456939E+00	7.55081752E-03
1.28000E+03	8.59798954E+02	-2.64510953E-11	-1.61899464E-13	7.21182181E-03	1.35147999E+00	7.21182181E-03

BEAM 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.08539858E+02	1.17809007E+04	8.07512953E+00	4.89875700E+00	3.37255463E+00	0.

STATION IN	INTG. PHI DX	M/Q	LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PRIME 1/IN
1.16000E+03	0.	0.	0.			-1.90956603E-02	1.01666723E+00	-1.90956603E-02
1.16200E+03	1.99211615E+00	-1.02712953E+05	-5.12811953E+04	-1.90957632E-02	9.80530095E-01	-1.80701393E-02		
1.16400E+03	3.91703503E+00	-2.05216226E+05	-5.12224459E+04	-1.90960711E-02	9.44338361E-01	-1.80716222E-02		
1.16600E+03	5.76966736E+00	-3.07604207E+05	-5.11659027E+04	-1.90965840E-02	9.08243499E-01	-1.80732659E-02		
1.16800E+03	7.55000657E+00	-4.09881308E+05	-5.11115659E+04	-1.90973015E-02	8.72095190E-01	-1.80750701E-02		
1.17000E+03	9.25804543E+00	-5.12051942E+05	-5.10594358E+04	-1.90982234E-02	8.35943112E-01	-1.80770347E-02		
1.18000E+03	1.67134371E+01	-1.02146260E+06	-5.08318937E+04	-1.91058929E-02	6.55114989E-01	-1.80789255E-02		
1.19000E+03	2.23598699E+01	-1.52887385E+06	-5.06595619E+04	-1.91186460E-02	4.74144748E-01	-1.81054548E-02		
1.20000E+03	2.61957240E+01	-2.03483803E+06	-5.05424898E+04	-1.91364655E-02	2.92992690E-01	-1.81256157E-02		
1.20600E+03	2.76273365E+01	-2.33795193E+06	-5.04987963E+04	-1.91495840E-02	1.84197729E-01	-1.81396081E-02		
1.21000E+03	2.82046793E+01	-2.18207101E+06	3.89787560E+04	-1.91556107E-02	1.04469582E-01	-1.99351859E-02		
1.21200E+03	2.83737460E+01	-2.10410793E+06	3.89839160E+04	-1.91584682E-02	6.45962244E-02	-1.99381465E-02		
1.22000E+03	2.82523780E+01	-1.79222545E+06	3.89802118E+04	-1.91688584E-02	-9.49518406E-02	-1.99484626E-02		
1.23000E+03	2.63052623E+01	-1.40266972E+06	3.89207850E+04	-1.91795077E-02	-2.94486950E-01	-1.99579234E-02		
1.24000E+03	2.23623863E+01	-1.01401279E+06	3.88064466E+04	-1.91875627E-02	-4.94097600E-01	-1.99635716E-02		
1.24200E+03	2.13342636E+01	9.57242133E-13	4.22098427E-08	-1.91885506E-02	-5.34013707E-01	-1.91885506E-02		

t=150
Start Sustainer
Phase
Mode 1

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.39207146E+01	1.15061488E+03	2.07518290E+02	2.07518290E+02	1.26225925E+02	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.	-2.48483633E-02	7.70898222E+00	-2.48483633E-02
-3.70000000E+01	1.51764432E+04	1.50084554E+03	-2.48144513E-02	7.20808362E+00	-2.52200852E-02
-2.50000000E+01	3.83330107E+04	2.35233479E+03	-2.46590315E-02	6.89748250E+00	-2.60427579E-02
0.	1.18141648E+05	4.00497628E+03	-2.38402361E-02	6.24554073E+00	-2.57473676E-02
2.50000000E+01	2.37228628E+05	5.49529149E+03	-2.27730125E-02	5.61129917E+00	-2.43430957E-02
5.00000000E+01	3.91617873E+05	6.83072839E+03	-2.19484310E-02	5.01248143E+00	-2.34663707E-02
7.50000000E+01	5.77536632E+05	8.01873699E+03	-2.12381959E-02	4.43818557E+00	-2.26449918E-02
1.00000000E+02	7.91368974E+05	9.06446345E+03	-2.03404665E-02	3.88035158E+00	-2.19307233E-02
1.25000000E+02	1.02961147E+06	9.97246348E+03	-1.91449419E-02	3.34433388E+00	-2.08944969E-02
1.50000000E+02	1.28889818E+06	1.07492677E+04	-1.76217358E-02	2.83855066E+00	-1.95075722E-02
1.75000000E+02	1.58606888E+06	1.14051881E+04	-1.67728565E-02	2.38055744E+00	-1.79133753E-02
2.00000000E+02	1.85821940E+06	1.19485681E+04	-1.57543968E-02	1.94438939E+00	-1.69492537E-02
2.25000000E+02	2.16260964E+06	1.23854740E+04	-1.45582632E-02	1.53466462E+00	-1.57968106E-02
2.50000000E+02	2.47666645E+06	1.27233403E+04	-1.33633523E-02	1.16013092E+00	-1.39998287E-02
2.75000000E+02	2.79803912E+06	1.29724611E+04	-1.24963699E-02	8.25647986E-01	-1.28403213E-02
3.00000000E+02	3.12461605E+06	1.31407109E+04	-1.17286696E-02	5.15900835E-01	-1.19656883E-02
3.25000000E+02	3.45444741E+06	1.32336653E+04	-1.10245040E-02	2.26433118E-01	-1.12053724E-02
3.51200000E+02	4.16118155E+06	1.32556214E+04	-1.03334751E-02	-5.74987084E-02	-1.04779602E-02
3.75000000E+02	5.89224000E+06	1.23909328E+04	-9.47146141E-03	-2.96051156E-01	-9.58553870E-03
3.85000000E+02	6.01614444E+06	1.23899092E+04	-9.12491084E-03	-3.90129688E-01	-9.23208998E-03
4.00000000E+02	6.20144522E+06	1.23130928E+04	-8.65678500E-03	-5.24941543E-01	-8.75560597E-03
4.25000000E+02	6.50718917E+06	1.21366527E+04	-7.91247754E-03	-7.34725053E-01	-8.05302940E-03
4.50000000E+02	6.80781059E+06	1.19041505E+04	-7.09801555E-03	-9.26083697E-01	-7.26615327E-03
4.75000000E+02	7.10197427E+06	1.16209841E+04	-6.30701509E-03	-1.09706222E+00	-6.45092821E-03
5.00000000E+02	7.38848377E+06	1.12926491E+04	-5.70290282E-03	-1.25015086E+00	-5.82699787E-03
5.25000000E+02	7.66626722E+06	1.09235417E+04	-5.23530457E-03	-1.38940917E+00	-5.31378854E-03
5.50000000E+02	7.93434973E+06	1.05170557E+04	-4.73033723E-03	-1.51797469E+00	-4.87846477E-03
5.75000000E+02	8.19183624E+06	1.00765649E+04	-4.08001378E-03	-1.63177391E+00	-4.22193723E-03
5.77000000E+02	8.21195283E+06	1.00399902E+04	-4.02709829E-03	-1.64016438E+00	-4.16850660E-03
6.00000000E+02	8.43793223E+06	9.60658996E+03	-3.40937963E-03	-1.72889882E+00	-3.54468371E-03
6.25000000E+02	8.67195942E+06	9.11186189E+03	-2.71938151E-03	-1.80884381E+00	-2.84771760E-03
6.50000000E+02	8.89335958E+06	8.59724936E+03	-2.01101605E-03	-1.87112929E+00	-2.13210407E-03

t=150, 22

6.7500000E+02	9.10109781E+06	8.06775129E+03	-1.28531993E-03	-1.91530283E+00	-1.39895023E-03
7.0000000E+02	9.29606574E+06	7.52848913E+03	-5.43359820E-04	-1.94094011E+00	-6.49394878E-04
7.2500000E+02	9.47808450E+06	6.98469891E+03	2.13777932E-04	-1.94764556E+00	1.15401891E-04
7.5000000E+02	9.64590744E+06	6.44172313E+03	9.84997875E-04	-1.93505276E+00	8.94269380E-04
7.7500000E+02	9.80022276E+06	5.90500237E+03	1.74396910E-03	-1.90285995E+00	1.66826394E-03
8.0000000E+02	9.94125446E+06	5.37989003E+03	2.43878267E-03	-1.85226754E+00	2.37694485E-03
8.2500000E+02	1.00693553E+07	4.87132632E+03	3.08854660E-03	-1.78466568E+00	3.03255434E-03
8.5000000E+02	1.01849973E+07	4.38393439E+03	3.71762111E-03	-1.70083893E+00	3.66944601E-03
8.7500000E+02	1.02887656E+07	3.92216405E+03	4.31133466E-03	-1.60144633E+00	4.27171684E-03
9.0000000E+02	1.03790443E+07	3.26154621E+03	4.87083317E-03	-1.48742469E+00	4.84035143E-03
9.2500000E+02	1.04521647E+07	2.59801332E+03	5.39212116E-03	-1.35958201E+00	5.37116944E-03
9.5000000E+02	1.05094660E+07	1.99697768E+03	5.86857878E-03	-1.21929079E+00	5.85247412E-03
9.7500000E+02	1.05525815E+07	1.46408999E+03	6.34731214E-03	-1.06694394E+00	6.33550497E-03
9.9100000E+02	1.05735442E+07	1.16140252E+03	6.65461298E-03	-9.63098407E-01	6.64524683E-03
1.0000000E+03	1.05577933E+07	-5.82322131E+03	6.82760139E-03	-9.02301237E-01	6.87456285E-03
1.0250000E+03	1.01450152E+07	-2.64389922E+04	7.29942439E-03	-7.22344142E-01	7.50597901E-03
1.0500000E+03	9.27545156E+06	-4.23038081E+04	7.72676176E-03	-5.27643777E-01	8.05726027E-03
1.0750000E+03	8.07232377E+06	-5.30716157E+04	8.10247314E-03	-3.20504945E-01	8.49852998E-03
1.1000000E+03	6.06670658E+06	-5.84613283E+04	8.41313324E-03	-1.03527452E-01	8.83985827E-03
1.1250000E+03	5.19597724E+06	-5.82085351E+04	8.64152950E-03	1.22121055E-01	9.30723099E-03
1.1330000E+03	4.73550078E+06	-5.67996713E+04	8.70920148E-03	1.97586082E-01	9.57637203E-03
1.1600000E+03	3.31501443E+06	-4.78504632E+04	8.94142891E-03	4.59150663E-01	9.79286064E-03
1.1900000E+03	2.07580399E+06	-3.54472611E+04	9.16344189E-03	7.62691205E-01	1.11110936E-02
1.2000000E+03	1.55654637E+06	-2.97909592E+04	9.21671188E-03	9.58201244E-01	1.46097168E-02
1.2120000E+03	1.37939425E+06	-2.92514281E+04	9.22297301E-03	1.04546395E+00	9.28147587E-03
1.2250000E+03	1.00732973E+06	-2.79658790E+04	9.23330341E-03	1.16617737E+00	9.28923517E-03
1.2420000E+03	5.47659535E+05	-2.60729429E+04	9.24208463E-03	1.32414489E+00	9.29423051E-03
1.2500000E+03	3.42936134E+05	-2.50990414E+04	9.24445609E-03	1.39850122E+00	9.29465417E-03
1.26418000E+03	9.73010351E-29	-2.32420961E+04	9.24605629E-03	1.53028866E+00	9.29254048E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 3.22679202E+00				
1.26418000E+03	9.73010351E-29	-4.51091806E-10	9.24605629E-03	1.53028866E+00	5.70637487+312

C/50,1

t=150
Start Sustainer
Phase
Mode 2

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.83444331E+01	2.33718421E+03	2.07518290E+02	2.07518290E+02	9.53455285E+01	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.	-3.82901503E-02	9.10473751E+00	-3.82901503E-02
-3.70000000E+01	3.61615024E+04	3.56334145E+03	-3.82092047E-02	8.32956852E+00	-3.91722700E-02
-2.50000000E+01	9.09385361E+04	5.54619521E+03	-3.78398000E-02	7.84072475E+00	-4.11022678E-02
0.	2.77466851E+05	9.28823664E+03	-3.59077429E-02	6.81205304E+00	-4.03307127E-02
2.50000000E+01	5.51038656E+05	1.25131509E+04	-3.34148379E-02	5.82700700E+00	-3.69900239E-02
5.00000000E+01	8.99127600E+05	1.52571402E+04	-3.15103764E-02	4.92570860E+00	-3.49008520E-02
7.50000000E+01	1.31018616E+06	1.75558833E+04	-2.98890593E-02	4.08204782E+00	-3.29690388E-02
1.00000000E+02	1.77341644E+06	1.94340257E+04	-2.78655211E-02	3.27757699E+00	-3.12749993E-02
1.25000000E+02	2.27856228E+06	2.09134780E+04	-2.52038002E-02	2.52420341E+00	-2.88728314E-02
1.50000000E+02	2.81602105E+06	2.20249668E+04	-2.18551463E-02	1.84020203E+00	-2.57191755E-02
1.75000000E+02	3.37713844E+06	2.28150179E+04	-2.00129235E-02	1.26004350E+00	-2.22944253E-02
2.00000000E+02	3.95440091E+06	2.33207158E+04	-1.78315445E-02	7.28545469E-01	-2.01636160E-02
2.25000000E+02	4.54103001E+06	2.35692804E+04	-1.53034502E-02	2.54967585E-01	-1.76603783E-02
2.50000000E+02	5.13098935E+06	2.35933740E+04	-1.28099963E-02	-1.44169345E-01	-1.39902387E-02
2.75000000E+02	5.71919391E+06	2.34359109E+04	-1.10255999E-02	-4.62599057E-01	-1.16469789E-02
3.00000000E+02	6.30154257E+06	2.31291339E+04	-9.46674240E-03	-7.31045420E-01	-9.88392203E-03
3.25000000E+02	6.87459742E+06	2.26958665E+04	-8.05593460E-03	-9.58795576E-01	-8.36612573E-03
3.51200000E+02	7.93512202E+06	2.21318699E+04	-6.69025564E-03	-1.15891551E+00	-6.93149100E-03
3.75000000E+02	9.50569147E+06	-1.32039496E+04	-5.23766437E-03	-1.29732846E+00	-5.11610203E-03
3.85000000E+02	9.37361220E+06	-1.32119541E+04	-4.68817042E-03	-1.34575036E+00	-4.57388016E-03
4.00000000E+02	9.17193934E+06	-1.36813481E+04	-3.97695816E-03	-1.40886920E+00	-3.86715600E-03
4.25000000E+02	8.81969726E+06	-1.45058314E+04	-2.92215055E-03	-1.49153919E+00	-2.75416177E-03
4.50000000E+02	8.44632143E+06	-1.53694910E+04	-1.86617519E-03	-1.54692504E+00	-1.64909198E-03
4.75000000E+02	8.05102571E+06	-1.62568933E+04	-9.25559099E-04	-1.57585421E+00	-7.24235343E-04
5.00000000E+02	7.63338963E+06	-1.71548939E+04	-2.69940441E-04	-1.58544670E+00	-8.14251226E-05
5.25000000E+02	7.19327005E+06	-1.80543059E+04	1.91802814E-04	-1.58163325E+00	3.21520231E-04
5.50000000E+02	6.73071533E+06	-1.89486708E+04	6.39196286E-04	-1.56677666E+00	9.06078974E-04
5.75000000E+02	6.24594307E+06	-1.98303243E+04	1.16259678E-03	-1.53734502E+00	1.44189712E-03
5.77000000E+02	6.20621265E+06	-1.99000715E+04	1.20276510E-03	-1.53442003E+00	1.48304780E-03
6.00000000E+02	5.73936941E+06	-2.06915632E+04	1.64602022E-03	-1.49501736E+00	1.93745069E-03
6.25000000E+02	5.21159380E+06	-2.15253573E+04	2.08773142E-03	-1.44082333E+00	2.39090546E-03
6.50000000E+02	4.66338404E+06	-2.23252737E+04	2.48605041E-03	-1.37583769E+00	2.80049088E-03

C/SU 22

6.75000000E+02	4.09566104E+06	-2.30855018E+04	2.83936545E-03	-1.30117850E+00	3.16451336E-03
7.00000000E+02	3.50948293E+06	-2.38008777E+04	3.14614468E-03	-1.21800511E+00	3.48136831E-03
7.25000000E+02	2.90602860E+06	-2.44669066E+04	3.40494656E-03	-1.12751573E+00	3.74955088E-03
7.50000000E+02	2.28658074E+06	-2.50797843E+04	3.61442895E-03	-1.03094484E+00	3.96766535E-03
7.75000000E+02	1.65250826E+06	-2.56364360E+04	3.76886106E-03	-9.29802558E-01	4.09753332E-03
8.00000000E+02	1.00524388E+06	-2.61348984E+04	3.86275630E-03	-8.26139705E-01	4.16315743E-03
8.25000000E+02	3.46256583E+05	-2.65741710E+04	3.90669561E-03	-7.21357838E-01	4.21214585E-03
8.50000000E+02	-3.22967341E+05	-2.69537953E+04	3.90758112E-03	-6.16197585E-01	4.20377668E-03
8.75000000E+02	-1.00093689E+06	-2.72739073E+04	3.86953211E-03	-5.11915834E-01	4.14502612E-03
9.00000000E+02	-1.68757720E+06	-2.76715807E+04	3.79713354E-03	-4.09417530E-01	4.05574644E-03
9.25000000E+02	-2.38381121E+06	-2.80113821E+04	3.69586286E-03	-3.09541411E-01	3.92176110E-03
9.50000000E+02	-3.08737265E+06	-2.82583030E+04	3.57154115E-03	-2.12958351E-01	3.79943069E-03
9.75000000E+02	-3.79597780E+06	-2.84154250E+04	3.41511624E-03	-1.19843471E-01	3.64427289E-03
9.91000000E+02	-4.25111168E+06	-2.84705191E+04	3.29806980E-03	-6.24498954E-02	3.52767076E-03
1.00000000E+03	-4.51009149E+06	-2.91425035E+04	3.22639675E-03	-3.09980733E-02	3.46141694E-03
1.02500000E+03	-5.24031408E+06	-2.85559293E+04	3.00507415E-03	5.28422552E-02	3.22816735E-03
1.05000000E+03	-5.90326305E+06	-2.38167428E+04	2.76026406E-03	1.30148939E-01	2.94633236E-03
1.07500000E+03	-6.39959484E+06	-1.52938086E+04	2.49391622E-03	1.99632499E-01	2.60804912E-03
1.10000000E+03	-6.64000757E+06	-3.41870575E+03	2.21871478E-03	2.60314023E-01	2.24366884E-03
1.12500000E+03	-6.54576201E+06	1.16233594E+04	1.96290948E-03	3.11705728E-01	1.82997902E-03
1.13300000E+03	-6.43008865E+06	1.73363040E+04	1.87439680E-03	3.25519038E-01	1.60972040E-03
1.16000000E+03	-5.67509053E+06	3.70625226E+04	1.51806251E-03	3.59044272E-01	8.58587016E-04
1.19000000E+03	-4.29754101E+06	5.27334997E+04	1.09733484E-03	3.60414176E-01	-1.80011019E-03
1.20600000E+03	-3.41253753E+06	5.73230236E+04	9.84739667E-04	2.92313608E-01	-9.39234642E-03
1.21200000E+03	-3.06772203E+06	5.76032244E+04	9.70920279E-04	2.36170413E-01	8.55713831E-04
1.22500000E+03	-2.31519865E+06	5.81739190E+04	9.47588932E-04	2.47128611E-01	8.31241094E-04
1.24200000E+03	-1.31963275E+06	5.89586494E+04	9.26978956E-04	2.61055321E-01	8.09061657E-04
1.25000000E+03	-8.46433611E+05	5.93426965E+04	9.21201413E-04	2.67499962E-01	8.02516020E-04
1.26418000E+03	-4.59671774E-28	6.00463191E+04	9.17192744E-04	2.78831854E-01	7.97100106E-04
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -4.10411114E+00				
1.26418000E+03	-4.59671774E-28	-7.83232209E-09	9.17192744E-04	2.78831854E-01	9.90799775+313

t/50,2

t=150
Start Sustainer
Phase
Mode 3

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.68018905E+01	4.46249257E+03	2.07518290E+02	2.07518290E+02	1.80691622E+02	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.		-5.15889962E-02	9.63066263E+00	-5.15889962E-02
-3.70000000E+01	7.24441550E+04	7.10775802E+03		-5.14264913E-02	8.58012261E+00	-5.33475070E-02
-2.50000000E+01	1.81211010E+05	1.09672385E+04		-5.06886763E-02	7.90280035E+00	-5.71399931E-02
0.	5.45911804E+05	1.79756972E+04		-4.68645451E-02	6.47447570E+00	-5.54244009E-02
2.50000000E+01	1.06866207E+06	2.36251678E+04		-4.19942083E-02	5.13720122E+00	-4.87442562E-02
5.00000000E+01	1.71704615E+06	2.80548722E+04		-3.83284584E-02	3.96602504E+00	-4.45628745E-02
7.50000000E+01	2.46236647E+06	3.13993875E+04		-3.52557900E-02	2.90819409E+00	-4.07644544E-02
1.00000000E+02	3.27874446E+06	3.37515206E+04		-3.14851885E-02	1.92846912E+00	-3.74065079E-02
1.25000000E+02	4.14235291E+06	3.51940314E+04		-2.66068385E-02	1.04844060E+00	-3.27812300E-02
1.50000000E+02	5.03179663E+06	3.58397693E+04		-2.05729796E-02	3.00211458E-01	-2.68606584E-02
1.75000000E+02	5.92907495E+06	3.58507169E+04		-1.73108280E-02	-2.64176833E-01	-2.08958997E-02
2.00000000E+02	6.82009160E+06	3.53532805E+04		-1.35158151E-02	-7.39716607E-01	-1.70511431E-02
2.25000000E+02	7.69327927E+06	3.44411850E+04		-9.19522697E-03	-1.11200633E+00	-1.26393455E-02
2.50000000E+02	8.53959336E+06	3.32237830E+04		-5.00557568E-03	-1.35742481E+00	-6.66757275E-03
2.75000000E+02	9.35306750E+06	3.18353127E+04		-2.06106463E-03	-1.47387754E+00	-2.90514503E-03
3.00000000E+02	1.01307602E+07	3.03742577E+04		4.66892085E-04	-1.51004239E+00	-8.09676647E-05
3.25000000E+02	1.08717600E+07	2.89103953E+04		2.71657502E-03	-1.48137424E+00	2.32144809E-03
3.51200000E+02	1.09553300E+07	2.74479102E+04		4.85786962E-03	-1.39072303E+00	4.55868990E-03
3.75000000E+02	7.04645553E+06	-5.35073898E+04		6.02557072E-03	-1.24773156E+00	6.51818723E-03
3.85000000E+02	6.51131078E+06	-5.35214306E+04		6.42028509E-03	-1.18068701E+00	6.88327325E-03
4.00000000E+02	5.70290177E+06	-5.42548782E+04		6.88956279E-03	-1.07393927E+00	7.32499520E-03
4.25000000E+02	4.33283086E+06	-5.53159782E+04		7.47950078E-03	-8.81355213E-01	8.12010273E-03
4.50000000E+02	2.93892090E+06	-5.61590583E+04		7.92386020E-03	-6.71861949E-01	8.71706724E-03
4.75000000E+02	1.52683353E+06	-5.67680843E+04		8.18267074E-03	-4.51342808E-01	8.88568108E-03
5.00000000E+02	1.02520914E+05	-5.71367791E+04		8.25393089E-03	-2.29083752E-01	8.88180759E-03
5.25000000E+02	-1.32800293E+06	-5.72652877E+04		8.21817620E-03	-8.60692370E-03	8.62961851E-03
5.50000000E+02	-2.75877015E+06	-5.71561912E+04		8.07934549E-03	2.11713369E-01	8.88436227E-03
5.75000000E+02	-4.18381063E+06	-5.68075186E+04		7.79934412E-03	4.30507414E-01	8.59945002E-03
5.77000000E+02	-4.29738784E+06	-5.67694460E+04		7.77198538E-03	4.47678545E-01	8.57155504E-03
6.00000000E+02	-5.59720559E+06	-5.62261032E+04		7.40485060E-03	6.40704296E-01	8.19676755E-03
6.25000000E+02	-6.99326621E+06	-5.54228531E+04		6.89703530E-03	8.39375258E-01	7.67763887E-03
6.50000000E+02	-8.36661586E+06	-5.44118303E+04		6.27751533E-03	1.02363084E+00	7.04387913E-03

6.75000000E+02	-9.71226842E+06	-5.32102020E+04	5.54832614E-03	1.19063280E+00	6.29776560E-03
7.00000000E+02	-1.10257051E+07	-5.18381785E+04	4.71188697E-03	1.33760525E+00	5.44200216E-03
7.25000000E+02	-1.23029497E+07	-5.03189405E+04	3.77096011E-03	1.46184480E+00	4.47967758E-03
7.50000000E+02	-1.35406417E+07	-4.86785551E+04	2.72860416E-03	1.56072958E+00	3.41421761E-03
7.75000000E+02	-1.47361077E+07	-4.69459335E+04	1.62572463E-03	1.63144061E+00	2.22759558E-03
8.00000000E+02	-1.58874328E+07	-4.51525183E+04	5.48172224E-04	1.67313353E+00	1.06716669E-03
8.25000000E+02	-1.69934879E+07	-4.33295023E+04	-5.19636799E-04	1.68635313E+00	-2.15965432E-05
8.50000000E+02	-1.80539143E+07	-4.15072846E+04	-1.60814520E-03	1.67153858E+00	-1.15202119E-03
8.75000000E+02	-1.90691139E+07	-3.97165232E+04	-2.68441059E-03	1.62827298E+00	-2.28323358E-03
9.00000000E+02	-2.00310197E+07	-3.70697860E+04	-3.74267250E-03	1.55706558E+00	-3.39622590E-03
9.25000000E+02	-2.09232967E+07	-3.43421124E+04	-4.76705962E-03	1.45829939E+00	-4.49010710E-03
9.50000000E+02	-2.17498124E+07	-3.18166358E+04	-5.73714220E-03	1.33374058E+00	-5.48055643E-03
9.75000000E+02	-2.25161916E+07	-2.95387877E+04	-6.74340350E-03	1.18398681E+00	-6.50518747E-03
9.91000000E+02	-2.29781910E+07	-2.82322246E+04	-7.40519064E-03	1.07454178E+00	-7.17751141E-03
1.00000000E+03	-2.31188252E+07	2.01131342E+03	-7.78276213E-03	1.00733191E+00	-7.79898240E-03
1.02500000E+03	-2.19156728E+07	9.06810887E+04	-8.81327360E-03	7.90069752E-01	-9.52171960E-03
1.05000000E+03	-1.87795055E+07	1.56012297E+05	-9.71168434E-03	5.33719296E-01	-1.09305304E-02
1.07500000E+03	-1.43383154E+07	1.94598296E+05	-1.04308494E-02	2.47757128E-01	-1.18830755E-02
1.10000000E+03	-9.29245131E+06	2.04077375E+05	-1.09294922E-02	-5.69969464E-02	-1.24191081E-02
1.12500000E+03	-4.38958717E+06	1.82469503E+05	-1.11897360E-02	-3.74981383E-01	-1.32765472E-02
1.13300000E+03	-2.98034960E+06	1.67798694E+05	-1.12398076E-02	-4.83155579E-01	-1.38016197E-02
1.16000000E+03	5.88966162E+05	9.63894303E+04	-1.12933756E-02	-8.46248751E-01	-1.30084900E-02
1.19000000E+03	2.14915805E+06	1.37752733E+04	-1.11572436E-02	-1.21789034E+00	-1.19141267E-02
1.20600000E+03	2.08071822E+06	-1.98479781E+04	-1.10964079E-02	-1.38432283E+00	-7.50336340E-03
1.21200000E+03	1.95290786E+06	-2.27692143E+04	-1.10878067E-02	-1.42824356E+00	-1.10422682E-02
1.22500000E+03	1.61364947E+06	-2.95321128E+04	-1.10722881E-02	-1.57160247E+00	-1.10132239E-02
1.24200000E+03	1.02971550E+06	-3.93496858E+04	-1.10571514E-02	-1.75852545E+00	-1.09784520E-02
1.25000000E+03	6.95076348E+05	-4.43506907E+04	-1.10525342E-02	-1.84629373E+00	-1.09638328E-02
1.26418000E+03	7.77958732E-27	-5.38127643E+04	-1.10491431E-02	-2.00159670E+00	-1.09415175E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =				1.92634231E+00
1.26418000E+03	7.77958732E-27	-9.39560106E-10	-1.10491431E-02	-2.00159670E+00	1.18855677+313

t150/3

TRW SYSTEMS

t=150
Start Sustainer
Phase
Mode 4

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
1.07292565E+02	1.15116944E+04	2.07518290E+02	2.07518290E+02	8.18274356E+01	0.	
STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.		-6.85041969E-02	8.74694193E+00	-6.85041969E-02
-3.70000000E+01	1.66733649E+05	1.61990546E+04		-6.81284094E-02	7.33369754E+00	-7.25065323E-02
-2.50000000E+01	4.11987966E+05	2.44850900E+04		-6.64419236E-02	6.38054334E+00	-8.08449177E-02
0.	1.20348720E+06	3.79876590E+04		-5.78863889E-02	4.37282524E+00	-7.59757503E-02
2.50000000E+01	2.27116116E+06	4.66713923E+04		-4.73381254E-02	2.59439566E+00	-6.06728089E-02
5.00000000E+01	3.50409751E+06	5.13727031E+04		-3.96987537E-02	1.18864670E+00	-5.11149100E-02
7.50000000E+01	4.81306152E+06	5.28618369E+04		-3.35546485E-02	3.10336390E-02	-4.28286550E-02
1.00000000E+02	6.12479856E+06	5.16648071E+04		-2.63553925E-02	-9.51568595E-01	-3.54193937E-02
1.25000000E+02	7.37778504E+06	4.82505636E+04		-1.74627369E-02	-1.72255337E+00	-2.59277481E-02
1.50000000E+02	8.52378034E+06	4.32150712E+04		-6.98735647E-03	-2.23237355E+00	-1.45689479E-02
1.75000000E+02	9.53135366E+06	3.73028960E+04		-1.60646822E-03	-2.44180330E+00	-5.33675782E-03
2.00000000E+02	1.03861418E+07	3.10580815E+04		4.32910722E-03	-2.49430913E+00	1.22329906E-03
2.25000000E+02	1.10849101E+07	2.48926048E+04		1.07269526E-02	-2.37685161E+00	8.23769210E-03
2.50000000E+02	1.16351058E+07	1.92491184E+04		1.66103324E-02	-2.07626596E+00	1.56474084E-02
2.75000000E+02	1.20554576E+07	1.45682673E+04		2.05157578E-02	-1.62557993E+00	2.01294952E-02
3.00000000E+02	1.23740455E+07	1.11481833E+04		2.36892570E-02	-1.07877908E+00	2.34881775E-02
3.25000000E+02	1.26251654E+07	9.20258763E+03		2.63691001E-02	-4.56137430E-01	2.62433257E-02
3.51200000E+02	2.83980303E+06	8.93056501E+03		2.87910032E-02	2.64427029E-01	2.86936608E-02
3.75000000E+02	-3.60440465E+07	4.86834600E+04		2.33740700E-02	8.73171115E-01	2.29258651E-02
3.85000000E+02	-3.55570706E+07	4.87128153E+04		2.12900781E-02	1.09203821E+00	2.08686870E-02
4.00000000E+02	-3.48113720E+07	5.07954502E+04		1.85914799E-02	1.38422060E+00	1.81838118E-02
4.25000000E+02	-3.34881313E+07	5.52506572E+04		1.45869308E-02	1.78553009E+00	1.39470854E-02
4.50000000E+02	-3.20407037E+07	6.06823665E+04		1.05787211E-02	2.08275899E+00	9.72162556E-03
4.75000000E+02	-3.04483124E+07	6.68000947E+04		7.01488279E-03	2.27880606E+00	6.18763704E-03
5.00000000E+02	-2.86970666E+07	7.33564030E+04		4.54162280E-03	2.40101852E+00	3.73550848E-03
5.25000000E+02	-2.67782903E+07	8.01787754E+04		2.81307480E-03	2.47226499E+00	2.23700261E-03
5.50000000E+02	-2.46868936E+07	8.71463721E+04		1.16076946E-03	2.50097991E+00	-6.66442294E-05
5.75000000E+02	-2.24209870E+07	9.41127386E+04		-7.39912913E-04	2.47394588E+00	-2.06544444E-03
5.77000000E+02	-2.22322185E+07	9.46656198E+04		-8.83956138E-04	2.46966296E+00	-2.21727473E-03
6.00000000E+02	-1.99824545E+07	1.00935852E+05		-2.45087610E-03	2.39930564E+00	-3.87250783E-03
6.25000000E+02	-1.73764543E+07	1.07489494E+05		-3.95838498E-03	2.28204779E+00	-5.47232151E-03
6.50000000E+02	-1.46111612E+07	1.13661926E+05		-5.24924538E-03	2.12754001E+00	-6.85011758E-03

t=150, 228

6.75000000E+02	-1.16973416E+07	1.19356924E+05	-6.31102906E-03	1.94150729E+00	-7.99211250E-03
7.00000000E+02	-8.64796352E+06	1.24494739E+05	-7.13226758E-03	1.73000474E+00	-8.88571460E-03
7.25000000E+02	-5.47777339E+06	1.29012975E+05	-7.70261292E-03	1.49938551E+00	-9.51969707E-03
7.50000000E+02	-2.20285248E+06	1.32867375E+05	-8.01296319E-03	1.25626491E+00	-9.88433467E-03
7.75000000E+02	1.15984666E+06	1.36032967E+05	-8.05731859E-03	1.00867680E+00	-9.80133098E-03
8.00000000E+02	4.59307555E+06	1.38512034E+05	-7.85671039E-03	7.66005918E-01	-9.44880273E-03
8.25000000E+02	8.07991866E+06	1.40327359E+05	-7.44549508E-03	5.34177966E-01	-9.05845323E-03
8.50000000E+02	1.16041864E+07	1.41512578E+05	-6.83492313E-03	3.16313495E-01	-8.39000640E-03
8.75000000E+02	1.51506813E+07	1.42114841E+05	-6.06073735E-03	1.18254386E-01	-7.49624079E-03
9.00000000E+02	1.87060811E+07	1.42211942E+05	-5.14598359E-03	-5.62248910E-02	-6.47506716E-03
9.25000000E+02	2.22550898E+07	1.41594119E+05	-4.12384373E-03	-2.03571297E-01	-5.26573178E-03
9.50000000E+02	2.57806565E+07	1.40359381E+05	-3.03200517E-03	-3.21785271E-01	-4.16393566E-03
9.75000000E+02	2.92690239E+07	1.38641146E+05	-1.78071321E-03	-4.10406592E-01	-2.89878697E-03
9.91000000E+02	3.14771493E+07	1.37355009E+05	-8.97082652E-04	-4.49722069E-01	-2.00478433E-03
1.00000000E+03	3.25853259E+07	1.02775079E+05	-3.72464219E-04	-4.64385580E-01	-1.20129550E-03
1.02500000E+03	3.36677049E+07	-1.61500393E+04	1.14241656E-03	-4.63570141E-01	1.26858874E-03
1.05000000E+03	3.18442053E+07	-1.27147367E+05	2.58923698E-03	-4.02511306E-01	3.58257579E-03
1.07500000E+03	2.74983447E+07	-2.15688167E+05	3.87914343E-03	-2.88217499E-01	5.48875662E-03
1.10000000E+03	2.13483924E+07	-2.69712120E+05	4.91214511E-03	-1.32293668E-01	6.88084672E-03
1.12500000E+03	1.43744141E+07	-2.80031329E+05	5.59964957E-03	5.84453675E-02	8.80222584E-03
1.13300000E+03	1.21633345E+07	-2.71644190E+05	5.78037571E-03	1.33074355E-01	9.92761526E-03
1.16000000E+03	5.70632344E+06	-1.99295969E+05	6.28173669E-03	4.02173257E-01	9.82792831E-03
1.19000000E+03	1.46940056E+06	-8.81710207E+04	6.55173026E-03	6.98395249E-01	1.13962918E-02
1.20600000E+03	5.00228786E+05	-3.59184356E+04	6.58221530E-03	8.87546906E-01	1.30844665E-02
1.21200000E+03	2.99475605E+05	-3.09253528E+04	6.58392167E-03	9.63797771E-01	6.64577237E-03
1.22500000E+03	-2.75139361E+04	-1.92135383E+04	6.58499021E-03	1.05005274E+00	6.62341729E-03
1.24200000E+03	-2.13543986E+05	-2.38766431E+03	6.58335407E-03	1.16235870E+00	6.58812940E-03
1.25000000E+03	-1.98864186E+05	6.12040045E+03	6.58222406E-03	1.21499160E+00	6.56998326E-03
1.26418000E+03	-9.04412598E-25	2.21246327E+04	6.58110532E-03	1.30791965E+00	6.53685606E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -3.07017C43E-01			1.30791965E+00	6.49981555+315

e, 50, 4

t=150
Start Sustainer
Phase
Mode 5

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.02443641E+02	4.09834276E+04	2.07518290E+02	2.07518290E+02	2.06229730E+02	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.	-1.19987040E-01	9.04122028E+00	-1.19987040E-01
-3.70000000E+01	5.88665222E+05	5.58160703E+04	-1.18644997E-01	6.48924218E+00	-1.33730421E-01
-2.50000000E+01	1.40991825E+06	7.97198332E+04	-1.12792225E-01	4.61264622E+00	-1.59686245E-01
0.	3.77107735E+06	1.03405500E+05	-8.47902288E-02	7.87483766E-01	-1.34030943E-01
2.50000000E+01	6.32640413E+06	9.67097057E+04	-5.35126967E-02	-2.05349000E+00	-8.11440412E-02
5.00000000E+01	8.44510954E+06	7.03439219E+04	-3.36232234E-02	-3.68769995E+00	-4.92552061E-02
7.50000000E+01	9.75127328E+06	3.28127319E+04	-1.99339518E-02	-4.59327626E+00	-2.56905714E-02
1.00000000E+02	1.00380131E+07	-1.04488512E+04	-6.79596230E-03	-4.97849299E+00	-4.96283050E-03
1.25000000E+02	9.21954988E+06	-5.48246837E+04	5.99525882E-03	-4.84266641E+00	1.56136244E-02
1.50000000E+02	7.32570291E+06	-9.57486580E+04	1.69925842E-02	-4.21786835E+00	3.37905944E-02
1.75000000E+02	4.48626321E+06	-1.30275639E+05	2.05508847E-02	-3.46110760E+00	3.35784485E-02
2.00000000E+02	8.74353616E+05	-1.57332463E+05	2.21798691E-02	-2.56130052E+00	3.79131153E-02
2.25000000E+02	-3.30988048E+06	-1.75957647E+05	2.14781074E-02	-1.59196084E+00	3.90738720E-02
2.50000000E+02	-7.85124421E+06	-1.86005076E+05	1.87034634E-02	-7.04753608E-01	2.80082403E-02
2.75000000E+02	-1.25562692E+07	-1.89510831E+05	1.53763607E-02	-1.09023569E-01	2.04010444E-02
3.00000000E+02	-1.72885431E+07	-1.88414872E+05	1.15208912E-02	3.30928434E-01	1.49193257E-02
3.25000000E+02	-2.19491311E+07	-1.83970818E+05	7.32737886E-03	6.40073391E-01	9.84176253E-03
3.51200000E+02	-3.00488793E+07	-1.77023003E+05	2.69836696E-03	8.29522873E-01	4.62790151E-03
3.75000000E+02	-3.66267113E+07	2.66466296E+05	-3.27856175E-03	7.56255749E-01	-5.73178733E-03
3.85000000E+02	-3.39616579E+07	2.66543201E+05	-5.33360884E-03	6.89210830E-01	-7.63934587E-03
4.00000000E+02	-2.99344977E+07	2.70279665E+05	-7.78828098E-03	5.56276782E-01	-9.95745967E-03
4.25000000E+02	-2.31197458E+07	2.74404386E+05	-1.09061293E-02	2.58034770E-01	-1.40839450E-02
4.50000000E+02	-1.62427821E+07	2.75115566E+05	-1.33107962E-02	-1.28266934E-01	-1.71966092E-02
4.75000000E+02	-9.39905030E+06	2.71645038E+05	-1.47912338E-02	-5.72718571E-01	-1.81552591E-02
5.00000000E+02	-2.69807800E+06	2.63677204E+05	-1.53097454E-02	-1.02818319E+00	-1.82072971E-02
5.25000000E+02	3.74718515E+06	2.51199620E+05	-1.52859849E-02	-1.47643686E+00	-1.70908156E-02
5.50000000E+02	9.82547409E+06	2.34319201E+05	-1.48162334E-02	-1.92267747E+00	-1.81165038E-02
5.75000000E+02	1.54257446E+07	2.12976504E+05	-1.37944526E-02	-2.36012918E+00	-1.67941217E-02
5.77000000E+02	1.58498093E+07	2.11083769E+05	-1.36935617E-02	-2.39359040E+00	-1.66665726E-02
6.00000000E+02	2.04395204E+07	1.87464760E+05	-1.23439854E-02	-2.75831878E+00	-1.49843342E-02
6.25000000E+02	2.47679512E+07	1.58233135E+05	-1.05161913E-02	-3.10576217E+00	-1.27448270E-02
6.50000000E+02	2.83247830E+07	1.25837538E+05	-8.36991127E-03	-3.39253237E+00	-1.01422710E-02

t=150, 582

6.75000000E+02	3.10388236E+07	9.09240645E+04	-5.97035035E-03	-3.61046764E+00	-7.25097098E-03
7.00000000E+02	3.28559698E+07	5.42105359E+04	-3.38777778E-03	-3.75334320E+00	-4.15130645E-03
7.25000000E+02	3.37407535E+07	1.64665348E+04	-6.96083248E-04	-3.81700188E+00	-9.28006273E-04
7.50000000E+02	3.36773754E+07	-2.15076420E+04	2.02877115E-03	-3.79943996E+00	2.33169569E-03
7.75000000E+02	3.26701994E+07	-5.89035729E+04	4.62554999E-03	-3.70161875E+00	5.38072400E-03
8.00000000E+02	3.07433412E+07	-9.49650001E+04	6.86355221E-03	-3.53316639E+00	7.95510393E-03
8.25000000E+02	2.79384690E+07	-1.29046296E+05	8.77341712E-03	-3.30508483E+00	1.02567079E-02
8.50000000E+02	2.43122089E+07	-1.60589551E+05	1.04008251E-02	-3.02477529E+00	1.21655454E-02
8.75000000E+02	1.99341119E+07	-1.89124342E+05	1.16892756E-02	-2.70276546E+00	1.35996224E-02
9.00000000E+02	1.47492858E+07	-2.27517883E+05	1.26351328E-02	-2.34813198E+00	1.47614681E-02
9.25000000E+02	8.60034605E+06	-2.63348334E+05	1.32282891E-02	-1.96946805E+00	1.53520660E-02
9.50000000E+02	1.63500826E+06	-2.92798754E+05	1.34636998E-02	-1.57898635E+00	1.58249801E-02
9.75000000E+02	-5.98495976E+06	-3.15699169E+05	1.33670059E-02	-1.18142943E+00	1.59129669E-02
9.91000000E+02	-1.11292986E+07	-3.26894579E+05	1.31185054E-02	-9.27859234E-01	1.57547521E-02
1.00000000E+03	-1.49320848E+07	-5.52889290E+05	1.29083863E-02	-7.80024356E-01	1.73671709E-02
1.02500000E+03	-3.58214856E+07	-1.04597338E+06	1.18038873E-02	-3.00957308E-01	1.99755543E-02
1.05000000E+03	-6.34957988E+07	-1.09459154E+06	9.63025460E-03	1.85713861E-01	1.81817510E-02
1.07500000E+03	-8.71779310E+07	-7.42452914E+05	6.34824190E-03	5.67740174E-01	1.18889353E-02
1.10000000E+03	-9.84059106E+07	-1.26721564E+05	2.39353736E-03	7.60811867E-01	3.31851228E-03
1.12500000E+03	-9.28641916E+07	5.73936893E+05	-1.35393269E-03	7.20602780E-01	-7.91775784E-03
1.13300000E+03	-8.73984582E+07	7.87932128E+05	-2.58455509E-03	6.32323462E-01	-1.46140532E-02
1.16000000E+03	-5.88229362E+07	1.17974818E+06	-6.86116032E-03	3.28979925E-02	-2.78531209E-02
1.19000000E+03	-2.62740178E+07	9.03083485E+05	-1.03186855E-02	-1.06684284E+00	-5.99386572E-02
1.20600000E+03	-1.47194415E+07	5.31996801E+05	-1.09358239E-02	-2.27480846E+00	-1.07242269E-01
1.21200000E+03	-1.16726069E+07	4.81326066E+05	-1.09921161E-02	-2.89539110E+00	-1.19547682E-02
1.22500000E+03	-6.20857352E+06	3.58229627E+05	-1.10684455E-02	-3.04976406E+00	-1.17849048E-02
1.24200000E+03	-1.55293588E+06	1.87706657E+05	-1.11096896E-02	-3.24766419E+00	-1.14851029E-02
1.25000000E+03	-3.85420600E+05	1.03784724E+05	-1.11145602E-02	-3.33890037E+00	-1.13221296E-02
1.26418000E+03	2.92137583E-26	-5.06155966E+04	-1.11146573E-02	-3.49728061E+00	-1.10134261E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 1.97288490E-01				
1.26418000E+03	2.92137583E-26	2.68444004E-09	-1.11146573E-02	-3.49728061E+00	-3.39585446+313

\$AS001

174 SECOND BURN-WITH SHROUD

N=5,WOSQ=0.,DWOS=10.,

H=0.,CODEI=1,CODEII=1,

OUTST=-57.,-37.,-25.,0.,

25.,50.,75.,100.,125.,150.,175.,

200.,225.,250.,275.,300.,325.,

351.2,375.,385.,400.,425.,450.,

475.,500.,525.,550.,575.,577.,

600.,625.,650.,675.,700.,725.,

750.,775.,800.,825.,850.,875.,900.,

5150,5

281

t=174
With Shroud
Mode 1

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.68683895E+01	7.21910355E+02	3.03410661E+02	3.03410661E+02	2.36178191E+02	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.	-2.03919411E-02	7.72159310E+00	-2.03919411E-02
-3.70000000E+01	9.57563788E+03	9.48930112E+02	-2.03705660E-02	7.31127358E+00	-2.06270336E-02
-2.50000000E+01	2.42473633E+04	1.49316967E+03	-2.02723623E-02	7.05869767E+00	-2.11506974E-02
0.	7.51513399E+04	2.56520290E+03	-1.97528705E-02	6.52923533E+00	-2.09743957E-02
2.50000000E+01	1.51816326E+05	3.55431692E+03	-1.90719724E-02	6.01072627E+00	-2.00874915E-02
5.00000000E+01	2.52201628E+05	4.46345321E+03	-1.85426419E-02	5.51466561E+00	-1.95345204E-02
7.50000000E+01	3.74347278E+05	5.29557789E+03	-1.80838290E-02	5.03418889E+00	-1.90128778E-02
1.00000000E+02	5.16355798E+05	6.05273860E+03	-1.74999157E-02	4.56408898E+00	-1.85617996E-02
1.25000000E+02	6.76374312E+05	6.73674221E+03	-1.67170997E-02	4.10786416E+00	-1.78989843E-02
1.50000000E+02	8.52604836E+05	7.35021079E+03	-1.57128740E-02	3.67108872E+00	-1.70023846E-02
1.75000000E+02	1.04333295E+06	7.89738348E+03	-1.51492853E-02	3.26600238E+00	-1.59390236E-02
2.00000000E+02	1.24695020E+06	8.38171702E+03	-1.44682540E-02	2.87516889E+00	-1.53064257E-02
2.25000000E+02	1.46191580E+06	8.80570931E+03	-1.36625696E-02	2.50177045E+00	-1.45431405E-02
2.50000000E+02	1.68675804E+06	9.17245779E+03	-1.28520134E-02	2.15203653E+00	-1.33108594E-02
2.75000000E+02	1.92009934E+06	9.48637991E+03	-1.22593669E-02	1.82997152E+00	-1.25108885E-02
3.00000000E+02	2.16066546E+06	9.75088868E+03	-1.17305655E-02	1.52497579E+00	-1.19064421E-02
3.25000000E+02	2.40725224E+06	9.96840218E+03	-1.12417784E-02	1.23403145E+00	-1.13780195E-02
3.51200000E+02	2.67088499E+06	1.01482052E+04	-1.07584528E-02	9.42672317E-01	-1.08690673E-02
3.75000000E+02	4.29650866E+06	1.90245876E+04	-1.01493050E-02	6.89308460E-01	-1.03244551E-02
3.85000000E+02	4.48676066E+06	1.90257811E+04	-9.89372367E-03	5.87397896E-01	-1.00583066E-02
4.00000000E+02	4.77257154E+06	1.90797391E+04	-9.53913463E-03	4.39328261E-01	-9.69226255E-03
4.25000000E+02	5.25035327E+06	1.91359182E+04	-8.95245535E-03	2.03865177E-01	-9.17406413E-03
4.50000000E+02	5.72903360E+06	1.91520449E+04	-8.28081917E-03	-1.74374784E-02	-8.55132828E-03
4.75000000E+02	6.20764380E+06	1.91307961E+04	-7.60278591E-03	-2.21958320E-01	-7.83969979E-03
5.00000000E+02	6.68528684E+06	1.90751370E+04	-7.06581670E-03	-4.10573197E-01	-7.27543359E-03
5.25000000E+02	7.16113482E+06	1.89875633E+04	-6.63613982E-03	-5.86423500E-01	-6.77256254E-03
5.50000000E+02	7.63441597E+06	1.88700609E+04	-6.15621424E-03	-7.52626419E-01	-6.42198975E-03
5.75000000E+02	8.10440354E+06	1.87244828E+04	-5.52155996E-03	-9.05297104E-01	-5.78528507E-03
5.77000000E+02	8.14183976E+06	1.87117035E+04	-5.46915271E-03	-9.16815127E-01	-5.73269783E-03
6.00000000E+02	8.57042885E+06	1.85535596E+04	-4.84915896E-03	-1.04157313E+00	-5.11047670E-03
6.25000000E+02	9.03189491E+06	1.83602491E+04	-4.13935536E-03	-1.16050661E+00	-4.39795042E-03
6.50000000E+02	9.48828073E+06	1.81476744E+04	-3.39253836E-03	-1.26115993E+00	-3.64813941E-03

6.75000000E+02	9.93914544E+06	1.79191221E+04	-2.60913600E-03	-1.34260681E+00	-2.86151800E-03
7.00000000E+02	1.03841324E+07	1.76783400E+04	-1.78960848E-03	-1.40393331E+00	-2.03859496E-03
7.25000000E+02	1.08229730E+07	1.74280350E+04	-9.34441253E-04	-1.44423851E+00	-1.17990653E-03
7.50000000E+02	1.12554911E+07	1.71728709E+04	-4.41377266E-05	-1.46263522E+00	-2.86009148E-04
7.75000000E+02	1.16816062E+07	1.69164678E+04	8.50795244E-04	-1.45820510E+00	6.33917452E-04
8.00000000E+02	1.21013374E+07	1.66628020E+04	1.68768568E-03	-1.43169755E+00	1.49615922E-03
8.25000000E+02	1.25148006E+07	1.64156363E+04	2.48694438E-03	-1.38432305E+00	2.29825890E-03
8.50000000E+02	1.29222032E+07	1.61785482E+04	3.27689275E-03	-1.31677022E+00	3.09910651E-03
8.75000000E+02	1.33238412E+07	1.59550508E+04	4.03783079E-03	-1.22938757E+00	3.87666866E-03
9.00000000E+02	1.36040143E+07	1.61079990E+03	4.76838372E-03	-1.12190661E+00	4.7532952E-03
9.25000000E+02	1.34135515E+07	-1.62439802E+04	5.44654011E-03	-9.92294627E-01	5.57753995E-03
9.50000000E+02	1.28198089E+07	-3.08620031E+04	6.04413740E-03	-8.43816626E-01	6.29302453E-03
9.75000000E+02	1.18912844E+07	-4.29808498E+04	6.60690103E-03	-6.78102552E-01	6.95352078E-03
9.91000000E+02	1.11514600E+07	-4.93032557E+04	6.94251339E-03	-5.63713828E-01	7.33992030E-03
1.00000000E+03	1.06937844E+07	-5.23385492E+04	7.12108445E-03	-4.96731992E-01	7.54316953E-03
1.02500000E+03	9.29932583E+06	-5.87011785E+04	7.57548092E-03	-3.01654786E-01	8.03408387E-03
1.05000000E+03	7.78533514E+06	-6.18721100E+04	7.95043442E-03	-9.56143752E-02	8.43381028E-03
1.07500000E+03	6.23362914E+06	-6.16960146E+04	8.25333201E-03	1.18893478E-01	8.71375003E-03
1.10000000E+03	4.72937918E+06	-5.80597392E+04	8.48381413E-03	3.39373350E-01	8.90760785E-03
1.12500000E+03	3.36049444E+06	-5.07315084E+04	8.63883072E-03	5.64954498E-01	9.21902126E-03
1.13300000E+03	2.96769938E+06	-4.73985980E+04	8.68192245E-03	6.39403664E-01	9.40556517E-03
1.16000000E+03	1.87524651E+06	-3.39688395E+04	8.82010697E-03	8.93600251E-01	9.42453472E-03
1.19000000E+03	1.07589818E+06	-2.05114262E+04	8.93998329E-03	1.18018104E+00	1.00669847E-02
1.20600000E+03	7.92867045E+05	-1.52542767E+04	8.96739052E-03	1.34953741E+00	1.17288454E-02
1.21200000E+03	7.02681193E+05	-1.48118062E+04	8.97057954E-03	1.41963353E+00	9.00020315E-03
1.22500000E+03	5.15808041E+05	-1.39668907E+04	8.97585171E-03	1.53666084E+00	9.00378549E-03
1.24200000E+03	2.85765459E+05	-1.31590431E+04	8.98038096E-03	1.68975260E+00	9.00669905E-03
1.25000000E+03	1.81524121E+05	-1.29173593E+04	8.98162620E-03	1.76180948E+00	9.00746092E-03
1.26418000E+03	1.94920414E-28	-1.27424168E+04	8.98248224E-03	1.88954009E+00	9.00796707E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 2.81964350E+00				
1.26418000E+03	1.94920414E-28	1.41313334E-10	8.98248224E-03	1.88954009E+00	-1.78763358+312

t/24,1

t=174
With Shroud
Mode 2

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.77957608E+01	2.28443475E+03	3.03410661E+02	3.03410661E+02	9.64375375E+01	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.	-3.43186850E-02	8.24117979E+00	-3.43186850E-02
-3.70000000E+01	3.20021273E+04	3.15395666E+03	-3.42470553E-02	7.54651734E+00	-3.50994761E-02
-2.50000000E+01	8.04935366E+04	4.91046381E+03	-3.39201059E-02	7.10869969E+00	-3.68086141E-02
0.	2.45703310E+05	8.22943561E+03	-3.22095688E-02	6.18746135E+00	-3.61283477E-02
2.50000000E+01	4.88190230E+05	1.10956376E+04	-3.00015272E-02	5.30477634E+00	-3.31717094E-02
5.00000000E+01	7.96982472E+05	1.38403795E+04	-2.83138596E-02	4.49623101E+00	-3.13228328E-02
7.50000000E+01	1.16195509E+06	1.55945373E+04	-2.68763698E-02	3.73872372E+00	-2.96122535E-02
1.00000000E+02	1.57363193E+06	1.72794394E+04	-2.50812596E-02	3.01590060E+00	-2.81127402E-02
1.25000000E+02	2.02300553E+06	1.86140440E+04	-2.27187084E-02	2.33833146E+00	-2.59843302E-02
1.50000000E+02	2.50163421E+06	1.96249625E+04	-1.97447419E-02	1.72225615E+00	-2.31877178E-02
1.75000000E+02	3.00189829E+06	2.03525638E+04	-1.81076878E-02	1.19845392E+00	-2.01429442E-02
2.00000000E+02	3.51716850E+06	2.08290467E+04	-1.61680799E-02	7.17840751E-01	-1.82509846E-02
2.25000000E+02	4.04145357E+06	2.10780349E+04	-1.39187984E-02	2.88676044E-01	-1.60266019E-02
2.50000000E+02	4.56940654E+06	2.11279026E+04	-1.16990081E-02	-7.42597402E-02	-1.27559170E-02
2.75000000E+02	5.09650793E+06	2.10160215E+04	-1.01094161E-02	-3.65225707E-01	-1.06666342E-02
3.00000000E+02	5.61909560E+06	2.07704943E+04	-8.71984008E-03	-6.11625643E-01	-9.09447698E-03
3.25000000E+02	6.13408548E+06	2.04112142E+04	-7.46141667E-03	-8.21727973E-01	-7.74038279E-03
3.51200000E+02	6.66278223E+06	1.99311166E+04	-6.24271787E-03	-1.00750225E+00	-6.45996522E-03
3.75000000E+02	8.57007670E+06	-1.00948647E+04	-4.93905845E-03	-1.13785813E+00	-4.84611994E-03
3.85000000E+02	8.46909391E+06	-1.01017373E+04	-4.44312717E-03	-1.18384286E+00	-4.35574189E-03
4.00000000E+02	8.31455990E+06	-1.05061522E+04	-3.79951902E-03	-1.24420646E+00	-3.71519998E-03
4.25000000E+02	8.04307727E+06	-1.12198683E+04	-2.84057675E-03	-1.32441921E+00	-2.71064197E-03
4.50000000E+02	7.75325290E+06	-1.19712244E+04	-1.87447525E-03	-1.37990044E+00	-1.70539016E-03
4.75000000E+02	7.44431739E+06	-1.27464999E+04	-1.00815108E-03	-1.41117926E+00	-8.50299686E-04
5.00000000E+02	7.11582832E+06	-1.35338526E+04	-3.99668727E-04	-1.42450580E+00	-2.50945072E-04
5.25000000E+02	6.76759460E+06	-1.43249089E+04	3.25890541E-05	-1.42526075E+00	1.35511326E-04
5.50000000E+02	6.39960068E+06	-1.51137293E+04	4.55992201E-04	-1.41572212E+00	6.68861627E-04
5.75000000E+02	6.01198501E+06	-1.58933798E+04	9.56590367E-04	-1.39254034E+00	1.18044079E-03
5.77000000E+02	5.98013648E+06	-1.59551370E+04	9.95274697E-04	-1.39013987E+00	1.21999494E-03
6.00000000E+02	5.60506796E+06	-1.66566939E+04	1.42514818E-03	-1.35696902E+00	1.65974950E-03
6.25000000E+02	5.17934199E+06	-1.73970250E+04	1.86012781E-03	-1.30983540E+00	2.10515634E-03
6.50000000E+02	4.73545986E+06	-1.81081969E+04	2.26003771E-03	-1.25200689E+00	2.51508273E-03

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6.75000000E+02	4.27422266E+06	-1.87845253E+04	2.62344499E-03	-1.18438956E+00	2.88801577E-03
7.00000000E+02	3.79656721E+06	-1.94208389E+04	2.94898699E-03	-1.10792637E+00	3.22251993E-03
7.25000000E+02	3.30355299E+06	-2.00124994E+04	3.23538157E-03	-1.02359507E+00	3.51724776E-03
7.50000000E+02	2.79634858E+06	-2.05554202E+04	3.48143656E-03	-9.32405897E-01	3.77094952E-03
7.75000000E+02	2.27621760E+06	-2.10460990E+04	3.67999416E-03	-8.35606116E-01	3.94981594E-03
8.00000000E+02	1.74450045E+06	-2.14819654E+04	3.82179903E-03	-7.35032006E-01	4.06871818E-03
8.25000000E+02	1.20259032E+06	-2.18613155E+04	3.91753512E-03	-6.31988165E-01	4.16881461E-03
8.50000000E+02	6.51915890E+05	-2.21829472E+04	3.97526446E-03	-5.27167858E-01	4.21903311E-03
8.75000000E+02	9.39299381E+04	-2.24461780E+04	3.99717416E-03	-4.21685096E-01	4.22390324E-03
9.00000000E+02	-5.83459322E+05	-3.61690182E+04	3.98596228E-03	-3.15338477E-01	4.32399048E-03
9.25000000E+02	-1.67624542E+06	-5.01228035E+04	3.93181526E-03	-2.06619157E-01	4.33603142E-03
9.50000000E+02	-3.03653389E+06	-5.77940124E+04	3.82543299E-03	-9.85545389E-02	4.29151373E-03
9.75000000E+02	-4.52102381E+06	-6.00795448E+04	3.65388653E-03	7.04935205E-03	4.13839898E-03
9.91000000E+02	-5.47484384E+06	-5.87991151E+04	3.50844247E-03	7.20770482E-02	3.98262888E-03
1.00000000E+03	-5.99719447E+06	-5.71720703E+04	3.41456038E-03	1.07449471E-01	3.87562546E-03
1.02500000E+03	-7.33906179E+06	-4.94014465E+04	3.11119390E-03	1.99952000E-01	3.49714270E-03
1.05000000E+03	-8.43058630E+06	-3.72322609E+04	2.76425579E-03	2.82022486E-01	3.05513283E-03
1.07500000E+03	-9.16870089E+06	-2.12300472E+04	2.38290544E-03	3.52027177E-01	2.54133863E-03
1.10000000E+03	-9.46547350E+06	-2.03524832E+03	1.98942690E-03	4.08867424E-01	2.00428273E-03
1.12500000E+03	-9.24843445E+06	2.00807334E+04	1.62635231E-03	4.52100294E-01	1.39669915E-03
1.13300000E+03	-9.05586179E+06	2.80916021E+04	1.50149462E-03	4.62057779E-01	1.07261520E-03
1.16000000E+03	-7.90697003E+06	5.46301003E+04	1.00251511E-03	4.77160754E-01	3.04492702E-05
1.19000000E+03	-5.92997185E+06	7.43734915E+04	4.19323588E-04	4.44371600E-01	-3.66713199E-03
1.20600000E+03	-4.69115822E+06	7.97477228E+04	2.64156778E-04	3.31359784E-01	-1.41724332E-02
1.21200000E+03	-4.21175701E+06	8.00305960E+04	2.45170789E-04	2.46660500E-01	8.51095967E-05
1.22500000E+03	-3.16831208E+06	8.04784225E+04	2.13186285E-04	2.47543135E-01	5.22294402E-05
1.24200000E+03	-1.79651727E+06	8.08729330E+04	1.85045918E-04	2.48162495E-01	2.33000520E-05
1.25000000E+03	-1.14906082E+06	8.09831101E+04	1.77190651E-04	2.48314227E-01	1.52244311E-05
1.26418000E+03	-5.32573761E-26	8.10593122E+04	1.71758573E-04	2.48477321E-01	9.63994811E-06
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -5.66826080E+00				
1.26418000E+03	-5.32573761E-26	-6.38272855E-06	1.71758573E-04	2.48477321E-01	8.07424150+316

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t=174
With Shroud
Mode 3

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.75050284E+01	3.30682829E+03	3.03410661E+02	3.03410661E+02	2.69377518E+02	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.	-6.93028283E-02	1.44623323E+01	-6.93028283E-02
-3.70000000E+01	8.09379453E+04	7.95816917E+03	-6.91214597E-02	1.30553143E+01	-7.12723162E-02
-2.50000000E+01	2.02994909E+05	1.23328197E+04	-6.82959037E-02	1.21582814E+01	-7.55505036E-02
0.	6.15451849E+05	2.04352851E+04	-6.39976085E-02	1.02683702E+01	-7.37286966E-02
2.50000000E+01	1.21359678E+06	2.71991472E+04	-5.84873148E-02	8.47814196E+00	-6.62584997E-02
5.00000000E+01	1.96524625E+06	3.27393609E+04	-5.43084875E-02	6.87442920E+00	-6.15839011E-02
7.50000000E+01	2.84130593E+06	3.71681398E+04	-5.07780043E-02	5.39856024E+00	-5.72987306E-02
1.00000000E+02	3.81503584E+06	4.05629521E+04	-4.64081360E-02	4.01023377E+00	-5.35244433E-02
1.25000000E+02	4.86140389E+06	4.29927969E+04	-4.07066098E-02	2.73485714E+00	-4.82492058E-02
1.50000000E+02	5.95742088E+06	4.45530976E+04	-3.35932354E-02	1.61082042E+00	-4.14095683E-02
1.75000000E+02	7.08300502E+06	4.53845495E+04	-2.97131864E-02	7.05535717E-01	-3.42516414E-02
2.00000000E+02	8.22149558E+06	4.55981556E+04	-2.51585393E-02	-9.56219060E-02	-2.97183549E-02
2.25000000E+02	9.35844266E+06	4.52758289E+04	-1.99260139E-02	-7.74283582E-01	-2.44535968E-02
2.50000000E+02	1.04816155E+07	4.45145113E+04	-1.48082709E-02	-1.29898619E+00	-1.70350790E-02
2.75000000E+02	1.15815592E+07	4.34373422E+04	-1.11785858E-02	-1.66200227E+00	-1.23302820E-02
3.00000000E+02	1.26516181E+07	4.21357548E+04	-8.03516640E-03	-1.92465103E+00	-8.79516799E-03
3.25000000E+02	1.36870189E+07	4.06744861E+04	-5.21440333E-03	-2.10592766E+00	-5.77031358E-03
3.51200000E+02	1.47313553E+07	3.90315405E+04	-2.50744441E-03	-2.21933263E+00	-2.93288464E-03
3.75000000E+02	1.46107522E+07	-5.67061064E+04	-2.04382860E-04	-2.23719399E+00	3.17682680E-04
3.85000000E+02	1.40435954E+07	-5.67252469E+04	6.29709059E-04	-2.22994673E+00	1.12041189E-03
4.00000000E+02	1.31846827E+07	-5.77944766E+04	1.67462588E-03	-2.20517693E+00	2.13846598E-03
4.25000000E+02	1.17178979E+07	-5.95383426E+04	3.13593780E-03	-2.13094320E+00	3.82543800E-03
4.50000000E+02	1.02083952E+07	-6.12067541E+04	4.47665990E-03	-2.01749407E+00	5.34116208E-03
4.75000000E+02	8.65844341E+06	-6.27696924E+04	5.55595661E-03	-1.87048044E+00	6.33329026E-03
5.00000000E+02	7.07096707E+06	-6.42061525E+04	6.21617598E-03	-1.70421492E+00	6.92173810E-03
5.25000000E+02	5.44929033E+06	-6.55042624E+04	6.60819289E-03	-1.52710867E+00	7.07883096E-03
5.50000000E+02	3.79695794E+06	-6.66572131E+04	6.89888895E-03	-1.33991187E+00	7.83772294E-03
5.75000000E+02	2.11773767E+06	-6.76537143E+04	7.13755217E-03	-1.14052323E+00	8.09042138E-03
5.77000000E+02	1.98235731E+06	-6.77264749E+04	7.15077836E-03	-1.12432799E+00	8.10467237E-03
6.00000000E+02	4.15624843E+05	-6.84880024E+04	7.23984406E-03	-9.36546376E-01	8.20446381E-03
6.25000000E+02	-1.30529077E+06	-6.91577904E+04	7.20408296E-03	-7.31469901E-01	8.17813634E-03
6.50000000E+02	-3.04089740E+06	-6.96636092E+04	7.02891841E-03	-5.28820612E-01	8.01009601E-03

6.75000000E+02	-4.78713207E+06	-7.00088344E+04	6.71333005E-03	-3.32154259E-01	7.69936997E-03
7.00000000E+02	-6.54005196E+06	-7.01997061E+04	6.25662081E-03	-1.45046345E-01	7.24534907E-03
7.25000000E+02	-8.29590619E+06	-7.02453408E+04	5.65840434E-03	2.89168189E-02	6.64777534E-03
7.50000000E+02	-1.00512078E+07	-7.01577369E+04	4.91858661E-03	1.86146678E-01	5.90672375E-03
7.75000000E+02	-1.18028060E+07	-6.99518351E+04	4.06716856E-03	3.22544889E-01	4.96398696E-03
8.00000000E+02	-1.35479667E+07	-6.96459090E+04	3.17566931E-03	4.35197924E-01	3.97619700E-03
8.25000000E+02	-1.52844316E+07	-6.92395148E+04	2.23950019E-03	5.23081823E-01	3.03558656E-03
8.50000000E+02	-1.70104367E+07	-6.88125146E+04	1.23676605E-03	5.85764033E-01	1.99294753E-03
8.75000000E+02	-1.87247263E+07	-6.83258968E+04	2.01215811E-04	6.21431613E-01	8.91376384E-04
9.00000000E+02	-2.01412091E+07	-3.26962994E+04	-8.54543513E-04	6.26895462E-01	-5.48970622E-04
9.25000000E+02	-2.03528740E+07	1.46893920E+04	-1.87276973E-03	5.94462279E-01	-1.99123256E-03
9.50000000E+02	-1.94620400E+07	5.57827299E+04	-2.78154770E-03	5.29014676E-01	-3.23140843E-03
9.75000000E+02	-1.76126799E+07	9.10101741E+04	-3.62749283E-03	4.33812165E-01	-4.36144585E-03
9.91000000E+02	-1.60037820E+07	1.09519715E+05	-4.11717704E-03	3.58817457E-01	-5.00040055E-03
1.00000000E+03	-1.49775757E+07	1.18323118E+05	-4.37076883E-03	3.12333259E-01	-5.32498753E-03
1.02500000E+03	-1.17771536E+07	1.35974340E+05	-4.97974805E-03	1.69363729E-01	-6.04204758E-03
1.05000000E+03	-8.27054290E+06	1.42639670E+05	-5.42000028E-03	1.16507911E-02	-6.53437270E-03
1.07500000E+03	-4.74403898E+06	1.37463757E+05	-5.70102867E-03	-1.54518028E-01	-6.72687760E-03
1.10000000E+03	-1.49924124E+06	1.20075238E+05	-5.83136422E-03	-3.22940265E-01	-6.70782581E-03
1.12500000E+03	1.15664712E+06	8.98669525E+04	-5.83434215E-03	-4.91094568E-01	-6.86210490E-03
1.13300000E+03	1.82390593E+06	7.67140072E+04	-5.81386309E-03	-5.46447362E-01	-6.98506930E-03
1.16000000E+03	3.17360097E+06	2.54738275E+04	-5.65775045E-03	-7.23600357E-01	-6.11102140E-03
1.19000000E+03	3.13941902E+06	-2.28991333E+04	-5.38156106E-03	-8.84433640E-01	-4.12336692E-03
1.20600000E+03	2.62157335E+06	-4.02999335E+04	-5.29765360E-03	-9.18064963E-01	1.99777245E-03
1.21200000E+03	2.37570677E+06	-4.16265311E+04	-5.28699585E-03	-9.05741799E-01	-5.20374279E-03
1.22500000E+03	1.81800134E+06	-4.40869182E+04	-5.26879998E-03	-9.73233830E-01	-5.18062614E-03
1.24200000E+03	1.04712978E+06	-4.64211685E+04	-5.25252667E-03	-1.06111099E+00	-5.15968433E-03
1.25000000E+03	6.72798143E+05	-4.71151873E+04	-5.24793772E-03	-1.10236285E+00	-5.15370735E-03
1.26418000E+03	3.92002302E-19	-4.76155764E+04	-5.24475199E-03	-1.17540292E+00	-5.14952084E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 2.30018660E+00				
1.26418000E+03	3.92002302E-19	-6.11297997E-06	-5.24475199E-03	-1.17540292E+00	7.73300575+316

E174, 3 287

t=174
With Shroud
Mode 4

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
1.06635642E+02	1.13711602E+04	3.03410661E+02	-3.03410661E+02	1.10254958E+02	0.	
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN	
-5.70000000E+01	0.	0.	-8.53924825E-02	1.09599083E+01	-8.53924825E-02	
-3.70000000E+01	2.06427668E+05	2.00588654E+04	-8.49272688E-02	9.19862267E+00	-9.03485838E-02	
-2.50000000E+01	5.10175626E+05	3.03301105E+04	-8.28390410E-02	8.01153514E+00	-1.00680282E-01	
0.	1.49111760E+06	4.71029554E+04	-7.22415243E-02	5.51084789E+00	-9.46715031E-02	
2.50000000E+01	2.81583291E+06	5.79446904E+04	-5.91680833E-02	3.29361829E+00	-7.57237091E-02	
5.00000000E+01	4.34772729E+06	6.38780185E+04	-4.96932070E-02	1.53800664E+00	-6.38883222E-02	
7.50000000E+01	5.97672615E+06	6.58455527E+04	-4.20669467E-02	8.98919336E-02	-5.36187981E-02	
1.00000000E+02	7.61231476E+06	6.44911665E+04	-3.31230583E-02	-1.14141406E+00	-4.44372981E-02	
1.25000000E+02	9.17833638E+06	6.03889285E+04	-2.20653105E-02	-2.11030368E+00	-3.26598593E-02	
1.50000000E+02	1.06149054E+07	5.42693282E+04	-9.02664007E-03	-2.75492164E+00	-1.85475748E-02	
1.75000000E+02	1.18827648E+07	4.70474034E+04	-2.32194311E-03	-3.02513729E+00	-7.02668344E-03	
2.00000000E+02	1.29636548E+07	3.93926910E+04	5.08232367E-03	-3.10006194E+00	1.14305457E-03	
2.25000000E+02	1.38530052E+07	3.18120067E+04	1.30728801E-02	-2.96315964E+00	9.89167945E-03	
2.50000000E+02	1.45593970E+07	2.48508493E+04	2.04297693E-02	-2.59737364E+00	1.91866225E-02	
2.75000000E+02	1.51053440E+07	1.90548695E+04	2.53198579E-02	-2.04298226E+00	2.48146377E-02	
3.00000000E+02	1.55249579E+07	1.47940063E+04	2.92987611E-02	-1.36792250E+00	2.90319220E-02	
3.25000000E+02	1.58600600E+07	1.23333519E+04	3.26630906E-02	-5.97595404E-01	3.24945270E-02	
3.51200000E+02	1.61727265E+07	1.19220085E+04	3.57158661E-02	2.95260520E-01	3.55859173E-02	
3.75000000E+02	-4.38691560E+07	5.57739032E+04	2.92045166E-02	1.05489880E+00	2.86910334E-02	
3.85000000E+02	-4.33112479E+07	5.58090805E+04	2.66670891E-02	1.32914822E+00	2.61843116E-02	
4.00000000E+02	-4.24560214E+07	5.83226904E+04	2.33780210E-02	1.69649301E+00	2.29099416E-02	
4.25000000E+02	-4.09331794E+07	6.37382326E+04	1.84888480E-02	2.20431084E+00	1.77507098E-02	
4.50000000E+02	-3.92588855E+07	7.03809477E+04	1.35836932E-02	2.58517739E+00	1.25896121E-02	
4.75000000E+02	-3.74068447E+07	7.79003880E+04	9.21165273E-03	2.84219854E+00	8.24694204E-03	
5.00000000E+02	-3.53590872E+07	8.59965469E+04	6.16906209E-03	3.00834747E+00	5.22404510E-03	
5.25000000E+02	-3.31039804E+07	9.44593423E+04	4.03600989E-03	3.11153275E+00	3.35733401E-03	
5.50000000E+02	-3.06342673E+07	1.03141114E+05	1.98908721E-03	3.16226611E+00	5.36395455E-04	
5.75000000E+02	-2.79466004E+07	1.11863872E+05	-3.74510361E-04	3.14414229E+00	-1.95005785E-03	
5.77000000E+02	-2.77221783E+07	1.12558101E+05	-5.54087812E-04	3.14005258E+00	-2.13941317E-03	
6.00000000E+02	-2.50421896E+07	1.20453297E+05	-2.51259853E-03	3.06665825E+00	-4.20912384E-03	
6.25000000E+02	-2.19263507E+07	1.28753526E+05	-4.40788604E-03	2.93574363E+00	-6.22131598E-03	
6.50000000E+02	-1.86080857E+07	1.36625736E+05	-6.04366194E-03	2.75780563E+00	-7.96796807E-03	

t=174, 288

6.75000000E+02	-1.50996408E+07	1.43949431E+05	-7.40407508E-03	2.53970471E+00	-9.43153185E-03
7.00000000E+02	-1.14160327E+07	1.50623654E+05	-8.47437693E-03	2.28872334E+00	-1.05958368E-02
7.25000000E+02	-7.57454616E+06	1.56568099E+05	-9.24112490E-03	2.01252868E+00	-1.14463094E-02
7.50000000E+02	-3.59420479E+06	1.61724121E+05	-9.69234408E-03	1.71913040E+00	-1.19701486E-02
7.75000000E+02	5.04783135E+05	1.66056179E+05	-9.81745149E-03	1.41830132E+00	-1.19463769E-02
8.00000000E+02	4.70171721E+06	1.69561718E+05	-9.63655957E-03	1.12164078E+00	-1.15855448E-02
8.25000000E+02	8.97617194E+06	1.72263406E+05	-9.19283770E-03	8.36563372E-01	-1.11728769E-02
8.50000000E+02	1.33084826E+07	1.74197405E+05	-8.50173484E-03	5.66993967E-01	-1.04159920E-02
8.75000000E+02	1.76800746E+07	1.75416506E+05	-7.60522262E-03	3.20207150E-01	-9.37710651E-03
9.00000000E+02	2.23747622E+07	2.08345154E+05	-6.52757985E-03	9.81845041E-02	-8.47473082E-03
9.25000000E+02	2.76833251E+07	2.07999560E+05	-5.27927910E-03	-9.66042171E-02	-6.95669490E-03
9.50000000E+02	3.24096628E+07	1.63699402E+05	-3.90932293E-03	-2.50025801E-01	-5.22947940E-03
9.75000000E+02	3.55965782E+07	8.68967273E+04	-2.35643978E-03	-3.54351104E-01	-3.05721984E-03
9.91000000E+02	3.65142984E+07	2.68386080E+04	-1.30522786E-03	-3.91080867E-01	-1.52166825E-03
1.00000000E+03	3.65956204E+07	-8.91271286E+03	-7.06617760E-04	-4.00790978E-01	-6.34741043E-04
1.02500000E+03	3.51178744E+07	-1.08684256E+05	9.30454576E-04	-3.85935567E-01	1.77955032E-03
1.05000000E+03	3.12538797E+07	-1.97422510E+05	2.39409606E-03	-3.13837648E-01	3.93645941E-03
1.07500000E+03	2.54505878E+07	-2.61832702E+05	3.62506619E-03	-1.93926557E-01	5.57904158E-03
1.10000000E+03	1.84519287E+07	-2.91600279E+05	4.55212018E-03	-3.93363390E-02	6.68058937E-03
1.12500000E+03	1.12183256E+07	-2.79060630E+05	5.12078942E-03	1.42935304E-01	8.31226431E-03
1.13300000E+03	9.04363668E+06	-2.63595633E+05	5.25866601E-03	2.13065899E-01	9.28302682E-03
1.16000000E+03	3.10019570E+06	-1.72550805E+05	5.59073542E-03	4.57343974E-01	8.66103445E-03
1.19000000E+03	-2.00194541E+05	-5.49775779E+04	5.68116731E-03	7.04725568E-01	8.70191335E-03
1.20600000E+03	-6.48908610E+05	-4.53949326E+03	5.66971235E-03	8.30537133E-01	6.49148883E-03
1.21200000E+03	-6.63193601E+05	-2.68223020E+02	5.66691151E-03	8.67645622E-01	5.66744796E-03
1.22500000E+03	-6.11955691E+05	7.87456986E+03	5.66130927E-03	9.41176116E-01	5.64556013E-03
1.24200000E+03	-4.06701594E+05	1.56757688E+04	5.65541130E-03	1.03695445E+00	5.62405977E-03
1.25000000E+03	-2.71327236E+05	1.80127179E+04	5.65359490E-03	1.08191924E+00	5.61756947E-03
1.26418000E+03	9.06582363E-24	1.97055272E+04	5.65229334E-03	1.16153233E+00	5.61288228E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -2.76827320E-01				
1.26418000E+03	9.06582363E-24	3.89388399E-06	5.65229334E-03	1.16153233E+00	-4.92581808+316

t174, 28

t=174
With Shroud
Mode 5

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
1.49614037E+02	2.23843601E+04	3.03410661E+02	3.03410661E+02	2.83683263E+02	9.	

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PR. 1/IN
-5.70000000E+01	0.	0.		-2.80590490E-02	2.71038143E+00	-2.80590490E-02	
-3.70000000E+01	9.85936489E+04	9.47642332E+03		-2.78356980E-02	2.12368937E+00	-3.03968935E-02	
-2.50000000E+01	2.40320912E+05	1.39838026E+04		-2.68459569E-02	1.71138555E+00	-3.50717231E-02	
0.	6.76652914E+05	2.02157051E+04		-2.19485740E-02	8.51228839E-01	-3.15751002E-02	
2.50000000E+01	1.21852925E+06	2.25455338E+04		-1.61484920E-02	1.39666286E-01	-2.25900731E-02	
5.00000000E+01	1.77975878E+06	2.19454766E+04		-1.21551021E-02	-3.58725033E-01	-1.70318746E-02	
7.50000000E+01	2.29846366E+06	1.92586227E+04		-9.12231468E-03	-7.20170325E-01	-1.25010204E-02	
1.00000000E+02	2.72999563E+06	1.50489385E+04		-5.80256341E-03	-9.83622404E-01	-8.44272807E-03	
1.25000000E+02	3.04233630E+06	9.81339152E+03		-1.99060804E-03	-1.13669027E+00	-3.71225568E-03	
1.50000000E+02	3.21689988E+06	4.12784623E+03		2.14291373E-03	-1.16589014E+00	1.41873018E-03	
1.75000000E+02	3.24998702E+06	-1.42021900E+03		4.07446635E-03	-1.09152249E+00	4.21648825E-03	
2.00000000E+02	3.15018346E+06	-6.45324620E+03		5.98552404E-03	-9.55668257E-01	6.63084866E-03	
2.25000000E+02	2.93407538E+06	-1.06769648E+04		7.80155649E-03	-7.61450628E-01	8.86925297E-03	
2.50000000E+02	2.62534860E+06	-1.38234475E+04		9.25365725E-03	-5.20517322E-01	9.94516578E-03	
2.75000000E+02	2.25306524E+06	-1.57510032E+04		1.00619080E-02	-2.65124264E-01	1.04795295E-02	
3.00000000E+02	1.84847491E+06	-1.63980897E+04		1.05968488E-02	2.34613328E-03	1.08926208E-02	
3.25000000E+02	1.44425788E+06	-1.57141902E+04		1.09507622E-02	2.78332678E-01	1.11655327E-02	
3.51200000E+02	1.05782308E+06	-1.35325186E+04		1.11893055E-02	5.73328937E-01	1.13368088E-02	
3.75000000E+02	-3.30119506E+07	1.53910738E+05		6.05591813E-03	7.41009122E-01	4.63893682E-03	
3.85000000E+02	-3.14726243E+07	1.53954877E+05		4.17878971E-03	7.78300809E-01	2.84700011E-03	
4.00000000E+02	-2.91439889E+07	1.56543681E+05		1.85202634E-03	8.03354016E-01	5.95656502E-04	
4.25000000E+02	-2.51760264E+07	1.60864289E+05		-1.33659129E-03	7.71846963E-01	-3.19952457E-03	
4.50000000E+02	-2.11041962E+07	1.64776313E+05		-4.16622183E-03	6.53660383E-01	-6.49357088E-03	
4.75000000E+02	-1.69443758E+07	1.67837833E+05		-6.34605952E-03	4.64760017E-01	-8.42454662E-03	
5.00000000E+02	-1.27217961E+07	1.69764821E+05		-7.59388169E-03	2.40005058E-01	-9.45942917E-03	
5.25000000E+02	-8.46679022E+06	1.70416077E+05		-8.25956351E-03	-2.02048405E-03	-9.48397687E-03	
5.50000000E+02	-4.21208576E+06	1.69724234E+05		-8.64829063E-03	-2.61235539E-01	-1.10387728E-02	
5.75000000E+02	6.98005936E+03	1.67548640E+05		-8.81748583E-03	-5.39690121E-01	-1.11773258E-02	
5.77000000E+02	3.41839371E+05	1.67309052E+05		-8.81636035E-03	-5.62040656E-01	-1.11728259E-02	
6.00000000E+02	4.15270564E+06	1.63857943E+05		-8.64913642E-03	-8.17110000E-01	-1.09569948E-02	
6.25000000E+02	8.18748573E+06	1.58682000E+05		-8.15067829E-03	-1.08461352E+00	-1.03856360E-02	
6.50000000E+02	1.20750605E+07	1.52098337E+05		-7.33253377E-03	-1.33356146E+00	-9.47476386E-03	

t174,8

6.75000000E+02	1.57816884E+07	1.44230585E+05	-6.20795559E-03	-1.55564640E+00	-8.23937228E-03
7.00000000E+02	1.92772739E+07	1.35246448E+05	-4.79277795E-03	-1.74297651E+00	-6.69765750E-03
7.25000000E+02	2.25364399E+07	1.25355229E+05	-3.10507883E-03	-1.88815107E+00	-4.87064543E-03
7.50000000E+02	2.55395325E+07	1.14804982E+05	-1.16475850E-03	-1.98432569E+00	-2.78173007E-03
7.75000000E+02	2.82735524E+07	1.03879922E+05	9.34943741E-04	-2.02458304E+00	-3.96850129E-04
8.00000000E+02	3.07330508E+07	9.28962444E+04	3.01222129E-03	-2.00631068E+00	1.94444836E-03
8.25000000E+02	3.29205180E+07	8.21697053E+04	5.08034712E-03	-1.93059279E+00	4.13586774E-03
8.50000000E+02	3.48462334E+07	7.20071395E+04	7.18593592E-03	-1.79865733E+00	6.39464867E-03
8.75000000E+02	3.65281299E+07	6.27154193E+04	9.25603342E-03	-1.61030581E+00	8.62254433E-03
9.00000000E+02	3.34696685E+07	-4.88865951E+05	1.12208016E-02	-1.32542455E+00	1.57896423E-02
9.25000000E+02	1.34468046E+07	-1.06461245E+06	1.24732372E-02	-8.50897467E-01	2.10588215E-02
9.50000000E+02	-1.72869637E+07	-1.34785167E+06	1.24127979E-02	-2.89051739E-01	2.32825694E-02
9.75000000E+02	-5.15733993E+07	-1.34811349E+06	1.08477834E-02	2.81462587E-01	2.17196664E-02
9.91000000E+02	-7.21486078E+07	-1.20668467E+06	9.04270975E-03	6.07312100E-01	1.87740378E-02
1.00000000E+03	-8.24800655E+07	-1.08449831E+06	7.77606950E-03	7.66441318E-01	1.65220236E-02
1.02500000E+03	-1.04115561E+08	-6.20224761E+05	3.49780609E-03	1.08365848E+00	8.34331203E-03
1.05000000E+03	-1.12631091E+08	-5.32317731E+04	-1.30732782E-03	1.17834553E+00	-8.91454588E-04
1.07500000E+03	-1.06867112E+08	5.03083055E+05	-6.09771279E-03	1.04165444E+00	-9.85206394E-03
1.10000000E+03	-8.84808131E+07	9.39666979E+05	-1.02471755E-02	6.99749534E-01	-1.71060585E-02
1.12500000E+03	-6.16192499E+07	1.16816054E+06	-1.31519074E-02	1.76871424E-01	-2.65115671E-02
1.13300000E+03	-5.22033769E+07	1.17919438E+06	-1.39274854E-02	-5.55236747E-02	-3.19304530E-02
1.16000000E+03	-2.28464394E+07	9.27688475E+05	-1.60334904E-02	-9.43668618E-01	-3.25404028E-02
1.19000000E+03	-3.48490152E+06	3.74782178E+05	-1.69849478E-02	-1.90880552E+00	-3.75773752E-02
1.20600000E+03	1.35438997E+05	9.24634272E+04	-1.70397609E-02	-2.48189685E+00	-3.37782524E-02
1.21200000E+03	6.13010696E+05	6.68508954E+04	-1.70381486E-02	-2.67324679E+00	-1.71718504E-02
1.22500000E+03	1.15031200E+06	1.74975048E+04	-1.70300433E-02	-2.89576978E+00	-1.70650383E-02
1.24200000E+03	1.01564409E+06	-2.97132616E+04	-1.70170097E-02	-3.18489829E+00	-1.69575832E-02
1.25000000E+03	7.17683990E+05	-4.38375345E+04	-1.70123372E-02	-3.32041871E+00	-1.69246621E-02
1.26418000E+03	-2.18942868E-27	-5.40599323E+04	-1.70088296E-02	-3.56018556E+00	-1.69007098E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 3.85794898E-01				
1.26418000E+03	-2.18942868E-27	1.08130078E-08	-1.70088296E-02	-3.56018556E+00	-1.36786071+314

\$AS001

174 SECOND BURN-WITHOUT SHROUD

N=5, WOSQ=0., DWOS=10.,

H=0., CODEI=1, CODEII=1,

OUTST=351., 375., 385., 400., 425., 450.,

475., 500., 525., 550., 575., 577.,

600., 625., 650., 675., 700., 725.,

750., 775., 800., 825., 850., 875., 900.,

925., 950., 975., 991., 1000., 1025.,

1050., 1075., 1100., 1125., 1133., 1160., 1190.,

1206., 1212., 1225., 1242., 1250., 1264.18,

+174, 5

291

t=174
Without Shroud
Mode 1

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.21010236E+01	1.77249619E+03	5.56555674E+01	5.56555674E+01	2.37316524E+01	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-6.91887754E-03	6.00072253E-01	-6.91887754E-03
3.75000000E+02	2.18342622E+06	1.38733122E+04	-6.66638394E-03	4.34983926E-01	-6.79467394E-03
3.85000000E+02	2.32216882E+06	1.38751834E+04	-6.55501618E-03	3.67635679E-01	-6.67504372E-03
4.00000000E+02	2.53034762E+06	1.38834099E+04	-6.38505763E-03	2.68846803E-01	-6.49648147E-03
4.25000000E+02	2.87770830E+06	1.39052690E+04	-6.06926319E-03	1.09992639E-01	-6.23029700E-03
4.50000000E+02	3.22547973E+06	1.39114492E+04	-5.69588373E-03	-4.13392163E-02	-5.89237312E-03
4.75000000E+02	3.57291900E+06	1.38743443E+04	-5.30994763E-03	-1.83323619E-01	-5.48176613E-03
5.00000000E+02	3.91863052E+06	1.37693352E+04	-4.99807803E-03	-3.16031073E-01	-5.14938940E-03
5.25000000E+02	4.26063224E+06	1.35739580E+04	-4.74434279E-03	-4.41136577E-01	-4.84186959E-03
5.50000000E+02	4.59640087E+06	1.32672264E+04	-4.45676050E-03	-5.60515668E-01	-4.64362284E-03
5.75000000E+02	4.92290257E+06	1.28297659E+04	-4.07284417E-03	-6.71789206E-01	-4.25354509E-03
5.77000000E+02	4.94852114E+06	1.27886501E+04	-4.04100082E-03	-6.80263904E-01	-4.22112265E-03
6.00000000E+02	5.23667458E+06	1.22466727E+04	-3.66308587E-03	-7.72960383E-01	-3.83557421E-03
6.25000000E+02	5.53392748E+06	1.15066584E+04	-3.22866309E-03	-8.63343857E-01	-3.39072870E-03
6.50000000E+02	5.81063571E+06	1.06021609E+04	-2.77106907E-03	-9.42284309E-01	-2.92039528E-03
6.75000000E+02	6.06263358E+06	9.52956834E+03	-2.29212801E-03	-1.00916589E+00	-2.42634728E-03
7.00000000E+02	6.28571657E+06	8.28941379E+03	-1.79400230E-03	-1.06342202E+00	-1.91075461E-03
7.25000000E+02	6.47574701E+06	6.88653630E+03	-1.27919143E-03	-1.10454537E+00	-1.37618490E-03
7.50000000E+02	6.62876331E+06	5.33020111E+03	-7.50522246E-04	-1.13209766E+00	-8.25595501E-04
7.75000000E+02	6.74109170E+06	3.63417327E+03	-2.28492256E-04	-1.14574569E+00	-2.75084221E-04
8.00000000E+02	6.80945378E+06	1.81601592E+03	2.48655625E-04	-1.14629560E+00	2.27781879E-04
8.25000000E+02	6.83103898E+06	-1.04515738E+02	6.91788624E-04	-1.13479107E+00	6.92989955E-04
8.50000000E+02	6.80355674E+06	-2.10552265E+03	1.11549534E-03	-1.11186524E+00	1.13863295E-03
8.75000000E+02	6.72529384E+06	-4.16276730E+03	1.50809089E-03	-1.07818199E+00	1.55013905E-03
9.00000000E+02	6.59516514E+06	-6.25035922E+03	1.86896452E-03	-1.03462664E+00	1.92737909E-03
9.25000000E+02	6.41274872E+06	-8.34117149E+03	2.19484445E-03	-9.82062894E-01	2.26211196E-03
9.50000000E+02	6.17830921E+06	-1.04076297E+04	2.48120059E-03	-9.21699488E-01	2.56513308E-03
9.75000000E+02	5.89280473E+06	-1.24215392E+04	2.75573484E-03	-8.53908301E-01	2.85590855E-03
9.91000000E+02	5.68402852E+06	-1.36692125E+04	2.92417354E-03	-8.06777256E-01	3.03440913E-03
1.00000000E+03	5.55791712E+06	-1.43532241E+04	3.01616149E-03	-7.79027174E-01	3.13191330E-03
1.02500000E+03	5.17608590E+06	-1.61717932E+04	3.25995764E-03	-6.97460336E-01	3.38629977E-03
1.05000000E+03	4.75053310E+06	-1.78456841E+04	3.47779965E-03	-6.09874848E-01	3.61721906E-03

1.07500000E+03	4.28527177E+06	-1.93431973E+04	3.67310216E-03	-5.16895733E-01	3.81745437E-03
1.10000000E+03	3.78510549E+06	-2.06328448E+04	3.84301110E-03	-4.19190026E-01	3.99361580E-03
1.12500000E+03	3.25562032E+06	-2.16833670E+04	3.97882356E-03	-3.16933730E-01	4.22680523E-03
1.13300000E+03	3.08101459E+06	-2.19632290E+04	4.02201827E-03	-2.82630203E-01	4.35733475E-03
1.16000000E+03	2.45005860E+06	-2.36967691E+04	4.18319223E-03	-1.61547625E-01	4.60484292E-03
1.19000000E+03	1.73281494E+06	-2.40310638E+04	4.35806144E-03	-1.43403767E-02	5.67844956E-03
1.20600000E+03	1.34861033E+06	-2.39587033E+04	4.40190515E-03	9.21467801E-02	8.73910705E-03
1.21200000E+03	1.20511769E+06	-2.38647088E+04	4.40735120E-03	1.44406124E-01	4.45508061E-03
1.22500000E+03	8.96679595E+05	-2.35701351E+04	4.41645622E-03	2.02380645E-01	4.46359649E-03
1.24200000E+03	5.00349272E+05	-2.30265424E+04	4.42436399E-03	2.78326641E-01	4.47041708E-03
1.25000000E+03	3.17388240E+05	-2.27067879E+04	4.42654349E-03	3.14096843E-01	4.47195706E-03
1.26418000E+03	4.84734506E-28	-2.20365425E+04	4.42803619E-03	3.77514135E-01	4.47210928E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 1.98602089E+00				
1.26418000E+03	4.84734506E-28	5.48122839E-08	4.42803619E-03	3.77514135E-01	-6.93383111+314

E174¹, 1

t=174
Without Shroud
Mode 2

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.54654475E+01	4.28572482E+03	5.56555674E+01	5.56555674E+01	2.88841450E+01	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-8.54794195E-03	2.36754170E-01	-8.54794195E-03
3.75000000E+02	5.84921671E+06	1.32312474E+04	-7.83598785E-03	3.85113834E-02	-7.95834051E-03
3.85000000E+02	5.98152986E+06	1.32312318E+04	-7.54351452E-03	-3.95625871E-02	-7.65797154E-03
4.00000000E+02	6.17996503E+06	1.32242336E+04	-7.11743255E-03	-1.51154756E-01	-7.22356604E-03
4.25000000E+02	6.50986770E+06	1.31501587E+04	-6.37586999E-03	-3.22733235E-01	-6.52815903E-03
4.50000000E+02	6.83628321E+06	1.29337699E+04	-5.55949903E-03	-4.75967444E-01	-5.74217940E-03
4.75000000E+02	7.15485117E+06	1.25133351E+04	-4.76391352E-03	-6.08751863E-01	-4.91887742E-03
5.00000000E+02	7.45985023E+06	1.18412222E+04	-4.15459945E-03	-7.23413152E-01	-4.28472277E-03
5.25000000E+02	7.74449311E+06	1.08790204E+04	-3.68228542E-03	-8.23974039E-01	-3.76044951E-03
5.50000000E+02	8.00111387E+06	9.59439234E+03	-3.17257043E-03	-9.13514536E-01	-3.30770271E-03
5.75000000E+02	8.22132672E+06	7.96407218E+03	-2.51816587E-03	-9.87787349E-01	-2.63033590E-03
5.77000000E+02	8.23710960E+06	7.81842963E+03	-2.46507399E-03	-9.92992900E-01	-2.57519271E-03
6.00000000E+02	8.39638037E+06	5.98173879E+03	-1.84776397E-03	-1.04485645E+00	-1.93201382E-03
6.25000000E+02	8.51753572E+06	3.65450033E+03	-1.16536018E-03	-1.08424729E+00	-1.21683202E-03
6.50000000E+02	8.57639793E+06	1.00281762E+03	-4.75643068E-04	-1.10559879E+00	-4.89767259E-04
6.75000000E+02	8.56525151E+06	-1.93943051E+03	2.16046924E-04	-1.10868489E+00	2.43362847E-04
7.00000000E+02	8.47739438E+06	-5.12508893E+03	9.03785768E-04	-1.09343481E+00	9.75970120E-04
7.25000000E+02	8.30746570E+06	-8.49409930E+03	1.58116086E-03	-1.05995108E+00	1.70079606E-03
7.50000000E+02	8.05176113E+06	-1.19741229E+04	2.24139201E-03	-1.00852474E+00	2.41004163E-03
7.75000000E+02	7.70852917E+06	-1.54815176E+04	2.85744724E-03	-9.39849863E-01	3.05592824E-03
8.00000000E+02	7.27820776E+06	-1.89260558E+04	3.38559993E-03	-8.56249972E-01	3.60314080E-03
8.25000000E+02	6.76351526E+06	-2.22157927E+04	3.84194527E-03	-7.59920013E-01	4.09729921E-03
8.50000000E+02	6.16949533E+06	-2.52562793E+04	4.24409318E-03	-6.52177980E-01	4.52163471E-03
8.75000000E+02	5.50358052E+06	-2.79514700E+04	4.58321422E-03	-5.34826687E-01	4.86555230E-03
9.00000000E+02	4.77558947E+06	-3.02067294E+04	4.86206944E-03	-4.09619061E-01	5.14437532E-03
9.25000000E+02	3.99768281E+06	-3.19295106E+04	5.08243597E-03	-2.78237315E-01	5.33993202E-03
9.50000000E+02	3.18427725E+06	-3.30324924E+04	5.24576692E-03	-1.42498006E-01	5.51215799E-03
9.75000000E+02	2.35193763E+06	-3.34300484E+04	5.37162776E-03	-2.98930885E-03	5.64122493E-03
9.91000000E+02	1.81784723E+06	-3.32756207E+04	5.43227320E-03	8.77697977E-02	5.70062498E-03
1.00000000E+03	1.51934914E+06	-3.30388352E+04	5.45957463E-03	1.39194018E-01	5.72601685E-03
1.02500000E+03	7.07229184E+05	-3.17798097E+04	5.51001344E-03	2.82932697E-01	5.75829321E-03
1.05000000E+03	6.17996569E+04	-2.95799788E+04	5.52396670E-03	4.26935790E-01	5.75506028E-03

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1.0750000E+03	-7.63372603E+05	-2.63728310E+04	5.50595587E-03	5.70208842E-01	5.70276804E-03
1.10000000E+03	-1.37154979E+06	-2.20989076E+04	5.46079453E-03	7.11834889E-01	5.62210043E-03
1.12500000E+03	-1.85898163E+06	-1.67041777E+04	5.39774525E-03	8.51685687E-01	5.58878246E-03
1.13300000E+03	-1.98480581E+06	-1.47315292E+04	5.37151367E-03	8.96416646E-01	5.59642251E-03
1.16000000E+03	-2.07307210E+06	6.28687057E+02	5.25111975E-03	1.04136666E+00	5.23993314E-03
1.19000000E+03	-1.90783245E+06	1.06758392E+04	5.08157744E-03	1.19120070E+00	4.49499287E-03
1.20600000E+03	-1.68930747E+06	1.67093550E+04	5.03112580E-03	1.25043454E+00	2.00626066E-03
1.21200000E+03	-1.58201869E+06	1.90587684E+04	5.02414982E-03	1.26158888E+00	4.98603228E-03
1.22500000E+03	-1.30009399E+06	2.43722627E+04	5.01161078E-03	1.32625483E+00	4.96286625E-03
1.24200000E+03	-8.23049107E+05	3.18521642E+04	4.99945954E-03	1.41038718E+00	4.93575521E-03
1.25000000E+03	-5.53393607E+05	3.55846202E+04	4.99577576E-03	1.44982785E+00	4.92460652E-03
1.26418000E+03	1.60430866E-21	4.25412739E+04	4.99308234E-03	1.51953588E+00	4.90799980E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -1.58566659E+00				
1.26418000E+03	1.60430866E-21	8.18374255E-12	4.99308234E-03	1.51953588E+00	-1.03525496+311

E174⁺, 2

t=174
Without Shroud
Mode 3

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.19702268E+02	1.43286329E+04	5.56555674E+01	5.56555674E+01	2.56186175E+01	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.		1.40229357E-02	4.63923455E-01	1.40229357E-02
3.75000000E+02	-2.82480482E+07	8.67406632E+04		1.03608811E-02	7.32781219E-01	9.55876843E-03
3.85000000E+02	-2.73804997E+07	8.67700717E+04		8.98537356E-03	8.21670209E-01	8.23476740E-03
4.00000000E+02	-2.60778435E+07	8.69628764E+04		7.11158574E-03	9.31276490E-01	6.41364933E-03
4.25000000E+02	-2.38931922E+07	8.79597170E+04		4.18742111E-03	1.05139563E+00	3.16877934E-03
4.50000000E+02	-2.16720909E+07	8.98827820E+04		1.40127808E-03	1.09440961E+00	1.31747263E-04
4.75000000E+02	-1.93918345E+07	9.26685393E+04		-9.44235436E-04	1.06781629E+00	-2.09183345E-03
5.00000000E+02	-1.70329618E+07	9.61370204E+04		-2.47017461E-03	9.96372201E-01	-3.52662539E-03
5.25000000E+02	-1.45811916E+07	1.00059983E+05		-3.45744591E-03	8.96624380E-01	-4.17636153E-03
5.50000000E+02	-1.20282007E+07	1.04186263E+05		-4.30473973E-03	7.71924937E-01	-5.77215188E-03
5.75000000E+02	-9.37320661E+06	1.08155507E+05		-5.16836762E-03	6.15670721E-01	-6.69168462E-03
5.77000000E+02	-9.15659562E+06	1.08454896E+05		-5.22814150E-03	6.02223120E-01	-6.75567524E-03
6.00000000E+02	-6.62491119E+06	1.11586031E+05		-5.81403046E-03	4.39220568E-01	-7.38566470E-03
6.25000000E+02	-3.80163801E+06	1.14088860E+05		-6.23487741E-03	2.48370396E-01	-7.84176276E-03
6.50000000E+02	-9.31389268E+05	1.15282127E+05		-6.42592677E-03	4.92019767E-02	-8.04961869E-03
6.75000000E+02	1.94859330E+06	1.14812076E+05		-6.38483238E-03	-1.51979633E-01	-8.00190387E-03
7.00000000E+02	4.79279734E+06	1.12374355E+05		-6.11259324E-03	-3.48734656E-01	-7.69533064E-03
7.25000000E+02	7.54893824E+06	1.07734961E+05		-5.61416360E-03	-5.34601210E-01	-7.13155742E-03
7.50000000E+02	1.01599694E+07	1.00750116E+05		-4.89892139E-03	-7.03228693E-01	-6.31793711E-03
7.75000000E+02	1.25665706E+07	9.13855708E+04		-4.01255073E-03	-8.47815679E-01	-5.18416061E-03
8.00000000E+02	1.47102520E+07	7.97424733E+04		-3.05176176E-03	-9.63334583E-01	-3.96834191E-03
8.25000000E+02	1.65363932E+07	6.60241109E+04		-2.03540393E-03	-1.04816143E+00	-2.79430176E-03
8.50000000E+02	1.79964942E+07	5.05137978E+04		-9.61177748E-04	-1.10187995E+00	-1.51627443E-03
8.75000000E+02	1.90502369E+07	3.35854076E+04		1.14672793E-04	-1.12328561E+00	-2.24573749E-04
9.00000000E+02	1.96677000E+07	1.56918488E+04		1.16445430E-03	-1.11311059E+00	1.01780151E-03
9.25000000E+02	1.98310184E+07	-2.65714923E+03		2.15466390E-03	-1.07274836E+00	2.17609253E-03
9.50000000E+02	1.95355818E+07	-2.09171072E+04		3.05108936E-03	-1.00526590E+00	3.21977571E-03
9.75000000E+02	1.87906120E+07	-3.85215945E+04		3.92380722E-03	-9.12001286E-01	4.23446524E-03
9.91000000E+02	1.80883260E+07	-4.91639923E+04		4.46064100E-03	-8.39234860E-01	4.85712481E-03
1.00000000E+03	1.76200444E+07	-5.48599103E+04		4.75287029E-03	-7.93991849E-01	5.19528892E-03
1.02500000E+03	1.60635280E+07	-6.92883041E+04		5.51874635E-03	-6.52901682E-01	6.06006123E-03
1.05000000E+03	1.41769892E+07	-8.11540290E+04		6.18300075E-03	-4.91718777E-01	6.81701660E-03

t178²,3

1.07500000E+03	1.20325241E+07	-8.98180663E+04	6.74999716E-03	-3.13524199E-01	7.42028124E-03
1.10000000E+03	9.71783116E+06	-9.46737962E+04	7.20820865E-03	-1.21706051E-01	7.89925825E-03
1.12500000E+03	7.33528966E+06	-9.51469462E+04	7.53647933E-03	8.28177210E-02	8.62462670E-03
1.13300000E+03	6.57731139E+06	-9.42572772E+04	7.63128154E-03	1.53471687E-01	9.07032394E-03
1.16000000E+03	4.23545204E+06	-8.25550644E+04	7.94276479E-03	4.02232064E-01	9.41171611E-03
1.19000000E+03	1.98163507E+06	-6.61023499E+04	8.19665692E-03	7.03010335E-01	1.18286542E-02
1.20600000E+03	1.02522056E+06	-5.28112501E+04	8.24135821E-03	9.23038622E-01	1.78016859E-02
1.21200000E+03	7.26423452E+05	-4.66618132E+04	8.24509556E-03	1.02704143E+00	8.33841918E-03
1.22500000E+03	2.14451664E+05	-3.18170167E+04	8.24903332E-03	1.13528202E+00	8.31266735E-03
1.24200000E+03	-1.43374499E+05	-9.77763482E+03	8.24908226E-03	1.27623740E+00	8.26863753E-03
1.25000000E+03	-1.76351472E+05	1.64706175E+03	8.24818904E-03	1.34229256E+00	8.24489492E-03
1.26418000E+03	-1.49901753E-27	2.35897991E+04	8.24711038E-03	1.45888956E+00	8.19993078E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -2.62993583E-01				
1.26418000E+03	-1.49901753E-27	-1.88989773E-09	8.24711038E-03	1.45888956E+00	2.39074724+313

5174, 3

t=174
Without Shroud
Mode 4

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.16810972E+02	4.70069977E+04	5.56555674E+01	5.56555674E+01	5.10029052E+01	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	5.54407234E-03	4.19600345E-01	5.54407234E-03
3.75000000E+02	-3.30097613E+07	2.57320691E+05	1.03283665E-03	4.34527860E-01	-1.34667242E-03
3.85000000E+02	-3.04362930E+07	2.57373350E+05	-5.36278093E-04	4.13845532E-01	-2.76269115E-03
4.00000000E+02	-2.65740583E+07	2.57644757E+05	-2.53553320E-03	3.58129423E-01	-4.60330814E-03
4.25000000E+02	-2.01222191E+07	2.58537808E+05	-5.27288355E-03	1.99538227E-01	-8.26695198E-03
4.50000000E+02	-1.36506524E+07	2.58996157E+05	-7.33580282E-03	-3.67483588E-02	-1.09939406E-02
4.75000000E+02	-7.18932033E+06	2.57430677E+05	-8.54212574E-03	-3.23052171E-01	-1.17301217E-02
5.00000000E+02	-8.09752583E+05	2.52194351E+05	-8.88937434E-03	-6.16242641E-01	-1.16607408E-02
5.25000000E+02	5.37742190E+06	2.41808987E+05	-8.75608906E-03	-8.99905015E-01	-1.04934495E-02
5.50000000E+02	1.12273905E+07	2.24981317E+05	-8.18955663E-03	-1.17926448E+00	-1.13583076E-02
5.75000000E+02	1.65601043E+07	2.00234640E+05	-7.06493759E-03	-1.44595080E+00	-9.88514378E-03
5.77000000E+02	1.69582348E+07	1.97886534E+05	-6.95681139E-03	-1.46558045E+00	-9.74394567E-03
6.00000000E+02	2.11669084E+07	1.66842516E+05	-5.53807737E-03	-1.66914761E+00	-7.88797196E-03
6.25000000E+02	2.48293421E+07	1.24727164E+05	-3.67631271E-03	-1.83652693E+00	-5.43303333E-03
6.50000000E+02	2.73354480E+07	7.44986052E+04	-1.56445152E-03	-1.93775528E+00	-2.61372765E-03
6.75000000E+02	2.84976835E+07	1.75043553E+04	6.96465386E-04	-1.96517026E+00	4.49925171E-04
7.00000000E+02	2.81714572E+07	-4.41719948E+04	2.99188084E-03	-1.91441660E+00	3.61402161E-03
7.25000000E+02	2.62729041E+07	-1.07771195E+05	5.19791205E-03	-1.78498505E+00	6.71581621E-03
7.50000000E+02	2.27943623E+07	-1.69982286E+05	7.18689276E-03	-1.58059680E+00	9.58100946E-03
7.75000000E+02	1.78159242E+07	-2.27141666E+05	8.78603425E-03	-1.31149255E+00	1.16981069E-02
8.00000000E+02	1.15085872E+07	-2.75742169E+05	9.82805293E-03	-9.98327056E-01	1.29975031E-02
8.25000000E+02	4.12531053E+06	-3.12762610E+05	1.03406613E-02	-6.60353388E-01	1.39356339E-02
8.50000000E+02	-4.01129054E+06	-3.35624942E+05	1.03485312E-02	-3.10785830E-01	1.40367173E-02
8.75000000E+02	-1.25218343E+07	-3.42448467E+05	9.87373206E-03	3.07076919E-02	1.33328075E-02
9.00000000E+02	-2.09918918E+07	-3.32301554E+05	8.96948650E-03	3.48493884E-01	1.20751085E-02
9.25000000E+02	-2.89948576E+07	-3.05151145E+05	7.72238593E-03	6.28650333E-01	1.01832823E-02
9.50000000E+02	-3.61163037E+07	-2.62009780E+05	6.23849956E-03	8.61267348E-01	8.35148166E-03
9.75000000E+02	-4.19748267E+07	-2.04440018E+05	4.45824608E-03	1.04277809E+00	6.10695591E-03
9.91000000E+02	-4.49052510E+07	-1.61107006E+05	3.19285482E-03	1.12773304E+00	4.49210487E-03
1.00000000E+03	-4.62380865E+07	-1.34876970E+05	2.44681490E-03	1.16387657E+00	3.53453240E-03
1.02500000E+03	-4.86468251E+07	-5.67215504E+04	2.86033993E-04	1.21763890E+00	7.29171105E-04
1.05000000E+03	-4.90378691E+07	2.57726043E+04	-1.86371880E-03	1.20100867E+00	-2.06506727E-03

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1.07500000E+03	-4.73622313E+07	1.07771738E+05	-3.95283401E-03	1.11533453E+00	-4.75710072E-03
1.10000000E+03	-4.36964506E+07	1.84106991E+05	-5.87500330E-03	9.64934018E-01	-7.21884995E-03
1.12500000E+03	-3.82475911E+07	2.49493252E+05	-7.46027924E-03	7.51608953E-01	-1.03136070E-02
1.13300000E+03	-3.61801852E+07	2.67023364E+05	-7.96775676E-03	6.62625684E-01	-1.20444493E-02
1.16000000E+03	-2.66470180E+07	3.70514497E+05	-9.79749193E-03	2.66198718E-01	-1.63902766E-02
1.19000000E+03	-1.53965904E+07	3.69577960E+05	-1.15459938E-02	-3.53446822E-01	-3.18524751E-02
1.20600000E+03	-9.72063528E+06	3.33525343E+05	-1.19124982E-02	-1.07295987E+00	-7.22900042E-02
1.21200000E+03	-7.79613966E+06	3.06284678E+05	-1.19498664E-02	-1.49440932E+00	-1.25624358E-02
1.22500000E+03	-4.26669812E+06	2.35300883E+05	-1.20014723E-02	-1.65718504E+00	-1.24720741E-02
1.24200000E+03	-1.14413434E+06	1.29604329E+05	-1.20304368E-02	-1.86775157E+00	-1.22896455E-02
1.25000000E+03	-3.24576002E+05	7.47336449E+04	-1.20341583E-02	-1.96565197E+00	-1.21836256E-02
1.26418000E+03	2.16928294E-26	-3.07058035E+04	-1.20345147E-02	-2.13695165E+00	-1.19731031E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 1.04347877E-01				
1.26418000E+03	2.16928294E-26	1.43047625E-07	-1.20345147E-02	-2.13695165E+00	-1.80957261+315

t174⁺,4

t=174
Without Shroud
Mode 5

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
3.43563793E+02	1.18036080E+05	5.56555674E+01	5.56555674E+01	5.45284160E+01	0.	
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN	
3.51200000E+02	0.	0.	2.76892067E-03	2.95952684E-01	2.76892067E-03	
3.75000000E+02	-3.77355558E+07	4.55677972E+05	-2.62879343E-03	1.85398393E-01	-6.84256210E-03	
3.85000000E+02	-3.31785294E+07	4.55723998E+05	-4.38292741E-03	1.09359586E-01	-8.32517653E-03	
4.00000000E+02	-2.63421200E+07	4.55771869E+05	-6.47128152E-03	-2.97683615E-02	-1.01291617E-02	
4.25000000E+02	-1.49600546E+07	4.54194624E+05	-8.89806628E-03	-3.28906584E-01	-1.41579924E-02	
4.50000000E+02	-3.68305940E+06	4.46504109E+05	-1.00318032E-02	-7.02774785E-01	-1.63383584E-02	
4.75000000E+02	7.26765352E+06	4.27179539E+05	-9.85761093E-03	-1.09878697E+00	-1.51477600E-02	
5.00000000E+02	1.75400754E+07	3.91600940E+05	-8.83931989E-03	-1.45277137E+00	-1.31426269E-02	
5.25000000E+02	2.66854873E+07	3.36606693E+05	-7.47221888E-03	-1.74930513E+00	-9.89068630E-03	
5.50000000E+02	3.41941263E+07	2.60338472E+05	-5.46015875E-03	-1.99891111E+00	-9.12689779E-03	
5.75000000E+02	3.95126257E+07	1.61501892E+05	-2.47149991E-03	-2.17386024E+00	-4.74617445E-03	
5.77000000E+02	3.98268276E+07	1.52678784E+05	-2.21555671E-03	-2.18297301E+00	-4.36596212E-03	
6.00000000E+02	4.21030738E+07	4.28302759E+04	8.39408972E-04	-2.23118290E+00	2.36165649E-04	
6.25000000E+02	4.15374336E+07	-8.97483795E+04	4.23430764E-03	-2.15970027E+00	5.49836933E-03	
6.50000000E+02	3.75723702E+07	-2.27441499E+05	7.44738248E-03	-1.95716698E+00	1.06507839E-02	
6.75000000E+02	3.02150563E+07	-3.59122843E+05	1.02029039E-02	-1.63167736E+00	1.52609721E-02	
7.00000000E+02	1.97707218E+07	-4.72260966E+05	1.22375022E-02	-1.20231260E+00	1.88890651E-02	
7.25000000E+02	6.86232706E+06	-5.54210253E+05	1.33252147E-02	-6.98799120E-01	2.11309929E-02	
7.50000000E+02	-7.58566716E+06	-5.93771739E+05	1.33027174E-02	-1.60026648E-01	2.16656997E-02	
7.75000000E+02	-2.24045767E+07	-5.82945183E+05	1.21441434E-02	3.63592485E-01	1.96177996E-02	
8.00000000E+02	-3.62944111E+07	-5.19559845E+05	1.00749325E-02	8.18297463E-01	1.60468848E-02	
8.25000000E+02	-4.79718300E+07	-4.06945190E+05	7.32376792E-03	1.17158653E+00	1.20012988E-02	
8.50000000E+02	-5.62935410E+07	-2.52742676E+05	4.06715621E-03	1.40689130E+00	6.84454825E-03	
8.75000000E+02	-6.03617470E+07	-6.90275873E+04	6.64126955E-04	1.50820602E+00	1.36137531E-03	
9.00000000E+02	-5.96280637E+07	1.28642948E+05	-2.60648853E-03	1.47649010E+00	-3.80875907E-03	
9.25000000E+02	-5.39570987E+07	3.23023081E+05	-5.47400980E-03	1.32405579E+00	-8.07903464E-03	
9.50000000E+02	-4.36438899E+07	4.97334625E+05	-7.70874497E-03	1.07512265E+00	-1.17195081E-02	
9.75000000E+02	-2.93923043E+07	6.35468305E+05	-9.38176128E-03	7.45208001E-01	-1.45065057E-02	
9.91000000E+02	-1.86943874E+07	6.98004937E+05	-1.00836312E-02	5.02796254E-01	-1.57127033E-02	
1.00000000E+03	-1.22949757E+07	7.22773480E+05	-1.03374843E-02	3.59214606E-01	-1.61663027E-02	
1.02500000E+03	6.22642425E+06	7.47849811E+05	-1.04781644E-02	-5.19104754E-02	-1.63207410E-02	
1.05000000E+03	2.45256437E+07	7.04488797E+05	-9.79981662E-03	-4.50022388E-01	-1.53036353E-02	

E174, 500

1.07500000E+03	4.08762146E+07	5.92459038E+05	-8.37976560E-03	-8.03055713E-01	-1.28011017E-02
1.10000000E+03	5.36270101E+07	4.18019607E+05	-6.37945565E-03	-1.08269917E+00	-9.43069366E-03
1.12500000E+03	6.13534169E+07	1.92597327E+05	-4.13717637E-03	-1.27839702E+00	-6.33981431E-03
1.13300000E+03	6.25729182E+07	1.11661221E+05	-3.29145898E-03	-1.32400372E+00	-4.99621045E-03
1.16000000E+03	5.32566698E+07	-4.82287408E+05	1.26913689E-04	-1.21399036E+00	8.70854017E-03
1.19000000E+03	3.47455203E+07	-7.31105294E+05	3.85031595E-03	-6.40786531E-01	4.40209365E-02
1.20600000E+03	2.26792475E+07	-7.51032454E+05	4.68792479E-03	5.72202832E-01	1.40646008E-01
1.21200000E+03	1.83148266E+07	-6.95431980E+05	4.77538178E-03	1.39375780E+00	6.16624574E-03
1.22500000E+03	1.03156011E+07	-5.33310690E+05	4.89792487E-03	1.47270785E+00	5.96454625E-03
1.24200000E+03	3.1709135E+06	-3.04109439E+05	4.97066384E-03	1.57099665E+00	5.57888272E-03
1.25000000E+03	1.19244689E+06	-1.89600979E+05	4.98189017E-03	1.61476918E+00	5.36109213E-03
1.26418000E+03	6.12015805E-26	2.35601485E+04	4.98514534E-03	1.68783369E+00	4.93802504E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -3.18851829E-02				
1.26418000E+03	6.12015805E-26	-2.63879744E-07	4.98514534E-03	1.68783369E+00	3.33811592+315

C174⁺, 5

t=220

Mode 1

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.16467054E+01	1.73444807E+03	1.56072189E+02	1.56072189E+02	2.96181555E+01	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-7.52272112E-03	6.36151153E-01	-7.52272112E-03
3.75000000E+02	2.31468037E+06	1.44248141E+04	-7.20876838E-03	4.57270736E-01	-7.34215825E-03
3.85000000E+02	2.45894797E+06	1.44276926E+04	-7.07003792E-03	3.84585911E-01	-7.19484495E-03
4.00000000E+02	2.67602471E+06	1.45113920E+04	-6.87347007E-03	2.78227639E-01	-6.98993389E-03
4.25000000E+02	3.03997097E+06	1.45923039E+04	-6.53901511E-03	1.07253050E-01	-6.70800531E-03
4.50000000E+02	3.40505337E+06	1.46028496E+04	-6.14472458E-03	-5.57738272E-02	-6.35097952E-03
4.75000000E+02	3.76955727E+06	1.45467126E+04	-5.73742050E-03	-2.08927235E-01	-5.91756554E-03
5.00000000E+02	4.13186940E+06	1.44281952E+04	-5.40848126E-03	-3.52291975E-01	-5.56703285E-03
5.25000000E+02	4.49047840E+06	1.42510222E+04	-5.14100128E-03	-4.87646187E-01	-5.24339269E-03
5.50000000E+02	4.84395748E+06	1.40182057E+04	-4.83793253E-03	-6.16980822E-01	-5.03537205E-03
5.75000000E+02	5.19094723E+06	1.37324894E+04	-4.43325127E-03	-7.37816100E-01	-4.62666661E-03
5.77000000E+02	5.21838724E+06	1.37074691E+04	-4.39967274E-03	-7.47035533E-01	-4.59273569E-03
6.00000000E+02	5.53017603E+06	1.33980728E+04	-4.00089171E-03	-8.48077755E-01	-4.18959696E-03
6.25000000E+02	5.86048330E+06	1.30195582E+04	-3.54152732E-03	-9.47065706E-01	-3.72490138E-03
6.50000000E+02	6.18082715E+06	1.26018387E+04	-3.05592042E-03	-1.03409951E+00	-3.23341110E-03
6.75000000E+02	6.49029158E+06	1.21500897E+04	-2.54491230E-03	-1.10852057E+00	-2.71604032E-03
7.00000000E+02	6.78809338E+06	1.16697590E+04	-2.00941283E-03	-1.16969406E+00	-2.17377564E-03
7.25000000E+02	7.07358886E+06	1.11665562E+04	-1.45038948E-03	-1.21701062E+00	-1.60766492E-03
7.50000000E+02	7.34628020E+06	1.06464425E+04	-8.68855743E-04	-1.24988772E+00	-1.01880564E-03
7.75000000E+02	7.60582167E+06	1.01156211E+04	-2.85395319E-04	-1.26774889E+00	-4.15082768E-04
8.00000000E+02	7.85202449E+06	9.58036435E+03	2.58612300E-04	-1.27114024E+00	1.48493169E-04
8.25000000E+02	8.08485238E+06	9.04658432E+03	7.76115589E-04	-1.26091383E+00	6.72131861E-04
8.50000000E+02	8.30441272E+06	8.51988246E+03	1.28514111E-03	-1.23756849E+00	1.19151603E-03
8.75000000E+02	8.51095112E+06	8.00573047E+03	1.77272750E-03	-1.20140766E+00	1.69186154E-03
9.00000000E+02	8.70219643E+06	7.24575319E+03	2.23867333E-03	-1.15302422E+00	2.17095601E-03
9.25000000E+02	8.87338847E+06	6.45664631E+03	2.67842495E-03	-1.09292021E+00	2.62635522E-03
9.50000000E+02	9.02541259E+06	5.71356804E+03	3.08528626E-03	-1.02211421E+00	3.03920910E-03
9.75000000E+02	9.15951146E+06	5.02384375E+03	3.49864531E-03	-9.40909209E-01	3.45813044E-03
9.91000000E+02	9.23657826E+06	4.61381164E+03	3.76624071E-03	-8.83414616E-01	3.72903255E-03
1.00000000E+03	9.27711063E+06	4.39482524E+03	3.91771903E-03	-8.49164169E-01	3.88227689E-03
1.02500000E+03	9.37982061E+06	3.83395613E+03	4.34119505E-03	-7.46757625E-01	4.31124226E-03
1.05000000E+03	9.45915464E+06	-1.09774617E+03	4.75457260E-03	-6.33688198E-01	4.76314875E-03

1.07500000E+03	9.14871132E+06	-2.29335054E+04	5.15836691E-03	-5.07379702E-01	5.32951248E-03
1.10000000E+03	8.35485934E+06	-3.96861168E+04	5.52804957E-03	-3.67837645E-01	5.81772925E-03
1.12500000E+03	7.21023523E+06	-5.10431268E+04	5.82902572E-03	-2.16093744E-01	6.41278007E-03
1.13300000E+03	6.79131411E+06	-5.35708018E+04	5.92448502E-03	-1.63556099E-01	6.74235986E-03
1.16000000E+03	5.27446216E+06	-5.69513176E+04	6.27592344E-03	2.59836852E-02	7.28929208E-03
1.19000000E+03	3.61526438E+06	-5.30114147E+04	6.64627140E-03	2.63574813E-01	9.55898649E-03
1.20600000E+03	2.79472436E+06	-4.95898489E+04	6.73745525E-03	4.47910805E-01	1.57146183E-02
1.21200000E+03	2.49831718E+06	-4.92062401E+04	6.74874264E-03	5.41751431E-01	6.84715512E-03
1.22500000E+03	1.86397653E+06	-4.84024531E+04	6.76763835E-03	6.30882545E-01	6.86444326E-03
1.24200000E+03	1.04861336E+06	-4.75760195E+04	6.78412971E-03	7.47716390E-01	6.87928175E-03
1.26418000E+03	0.	-4.71208820E+04	6.79186986E-03	9.00400104E-01	6.88611162E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 4.33988054E+00				
1.26418000E+03	0.	7.05942201E-07	6.79186986E-03	9.00400104E-01	-8.93026826+315

t=220

Mode 2

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.37121323E+01	4.05923580E+03	1.56072189E+02	1.56072189E+02	7.36472035E+01	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-1.95787698E-02	3.76981756E-01	-1.95787698E-02
3.75000000E+02	1.24809108E+07	1.99783049E+04	-1.77855739E-02	-7.26521194E-02	-1.79703183E-02
3.85000000E+02	1.26806817E+07	1.99762520E+04	-1.70542029E-02	-2.48617253E-01	-1.72270078E-02
4.00000000E+02	1.29788461E+07	1.97542965E+04	-1.60709264E-02	-4.99332739E-01	-1.62294681E-02
4.25000000E+02	1.34649222E+07	1.90682869E+04	-1.45219394E-02	-8.85890068E-01	-1.47427650E-02
4.50000000E+02	1.39292421E+07	1.80201575E+04	-1.28461977E-02	-1.23377902E+00	-1.31007197E-02
4.75000000E+02	1.43632423E+07	1.66496464E+04	-1.12366021E-02	-1.53955219E+00	-1.14427897E-02
5.00000000E+02	1.47593707E+07	1.49963545E+04	-1.00218957E-02	-1.80913103E+00	-1.01866908E-02
5.25000000E+02	1.51109655E+07	1.30914885E+04	-9.09365154E-03	-2.05106395E+00	-9.18771188E-03
5.50000000E+02	1.54120490E+07	1.09589158E+04	-8.10655944E-03	-2.27130105E+00	-8.26091037E-03
5.75000000E+02	1.56572158E+07	8.62311940E+03	-6.85337398E-03	-2.46179448E+00	-6.97482637E-03
5.77000000E+02	1.56742675E+07	8.42840743E+03	-6.75230447E-03	-2.47564034E+00	-6.87101444E-03
6.00000000E+02	1.58417726E+07	6.11545351E+03	-5.58283209E-03	-2.61987746E+00	-5.66896523E-03
6.25000000E+02	1.59618242E+07	3.46809263E+03	-4.29998412E-03	-2.74512371E+00	-4.34883050E-03
6.50000000E+02	1.60142841E+07	7.13562532E+02	-3.01016204E-03	-2.83724823E+00	-3.02021222E-03
6.75000000E+02	1.59968820E+07	-2.11540235E+03	-1.71891383E-03	-2.89611366E+00	-1.68911943E-03
7.00000000E+02	1.59081670E+07	-4.98600693E+03	-4.31937541E-04	-2.92173489E+00	-3.61712091E-04
7.25000000E+02	1.57475073E+07	-7.86554709E+03	8.44984817E-04	-2.91428199E+00	9.55767170E-04
7.50000000E+02	1.55150858E+07	-1.07215635E+04	2.10605317E-03	-2.87408142E+00	2.25706111E-03
7.75000000E+02	1.52118924E+07	-1.35220241E+04	3.30613852E-03	-2.80186972E+00	3.47949780E-03
8.00000000E+02	1.48396986E+07	-1.62369045E+04	4.36436238E-03	-2.70108414E+00	4.55099346E-03
8.25000000E+02	1.44009816E+07	-1.88397355E+04	5.31408728E-03	-2.57500143E+00	5.53063596E-03
8.50000000E+02	1.38988461E+07	-2.13065413E+04	6.19338660E-03	-2.42548583E+00	6.42752441E-03
8.75000000E+02	1.33369729E+07	-2.36152590E+04	6.98370789E-03	-2.25476014E+00	7.22224586E-03
9.00000000E+02	1.27081654E+07	-2.68727523E+04	7.68941813E-03	-2.06507714E+00	7.94056534E-03
9.25000000E+02	1.19953196E+07	-3.00982870E+04	8.30852522E-03	-1.85845302E+00	8.55125334E-03
9.50000000E+02	1.12061787E+07	-3.29725283E+04	8.83610422E-03	-1.63770637E+00	9.10201170E-03
9.75000000E+02	1.03498084E+07	-3.54730091E+04	9.32624983E-03	-1.40368962E+00	9.61232249E-03
9.91000000E+02	9.77086586E+06	-3.68674180E+04	9.61896827E-03	-1.24743653E+00	9.91628616E-03
1.00000000E+03	9.43581806E+06	-3.75787767E+04	9.77612260E-03	-1.15745251E+00	1.00791773E-02
1.02500000E+03	8.47431909E+06	-3.92706624E+04	1.01827895E-02	-9.00124408E-01	1.04895916E-02
1.05000000E+03	7.45112826E+06	-5.11571531E+04	1.05326228E-02	-6.33096070E-01	1.09322880E-02

t=220

1.07500000E+03	5.56822130E+06	-9.52826201E+04	1.08179648E-02	-3.51753048E-01	1.15290291E-02
1.10000000E+03	2.90141945E+06	-1.13699921E+05	1.09981560E-02	-5.91153449E-02	1.18280824E-02
1.12500000E+03	1.03961095E+05	-1.05369941E+05	1.10542402E-02	2.40281860E-01	1.22593028E-02
1.13300000E+03	-7.04989484E+05	-9.63542554E+04	1.10500139E-02	3.39335921E-01	1.25210712E-02
1.16000000E+03	-2.66464160E+06	-4.73361372E+04	1.09405218E-02	6.68578632E-01	1.17828018E-02
1.19000000E+03	-3.11128520E+06	1.34187614E+04	1.06832862E-02	9.99944075E-01	9.94599164E-03
1.20600000E+03	-2.68095355E+06	3.84861266E+04	1.06012346E-02	1.12571079E+00	3.63415886E-03
1.21200000E+03	-2.44384474E+06	4.05172614E+04	1.05903046E-02	1.14687158E+00	1.05092701E-02
1.22500000E+03	-1.89102417E+06	4.44196937E+04	1.05714835E-02	1.28331237E+00	1.04826441E-02
1.24200000E+03	-1.10076289E+06	4.82776805E+04	1.05544679E-02	1.46128974E+00	1.04579126E-02
1.26418000E+03	1.02181110E-20	5.03298609E+04	1.05462729E-02	1.69306531E+00	1.04456132E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -1.98064716E+00				
1.26418000E+03	1.02181110E-20	-1.57708428E-09	1.05462729E-02	1.69306531E+00	1.99503383+313

t=220

Mode 3

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.10706510E+02	1.22559313E+04	1.56072189E+02	1.56072189E+02	8.74485980E+01	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.		2.10874066E-02	5.94527353E-01		2.10874066E-02
3.75000000E+02	-3.67220814E+07	9.54032904E+04		1.55436193E-02	1.00704255E+00		1.46614011E-02
3.85000000E+02	-3.57677220E+07	9.54528177E+04		1.34362102E-02	1.14328422E+00		1.26104938E-02
4.00000000E+02	-3.43198186E+07	9.76511245E+04		1.07475244E-02	1.31181976E+00		9.96380746E-03
4.25000000E+02	-3.18269830E+07	1.01872607E+05		6.86777360E-03	1.50768366E+00		5.68800977E-03
4.50000000E+02	-2.92226054E+07	1.06524454E+05		3.13416281E-03	1.60125462E+00		1.62958013E-03
4.75000000E+02	-2.64996794E+07	1.11309219E+05		-4.76879763E-05	1.60100066E+00		-1.42613032E-03
5.00000000E+02	-2.36579971E+07	1.15994346E+05		-2.14800781E-03	1.53872844E+00		-3.42267096E-03
5.25000000E+02	-2.07020531E+07	1.20430368E+05		-3.53239183E-03	1.43666782E+00		-4.39766554E-03
5.50000000E+02	-1.76393303E+07	1.24519541E+05		-4.75595923E-03	1.30026998E+00		-6.50975558E-03
5.75000000E+02	-1.44800899E+07	1.28130280E+05		-6.05170404E-03	1.12014703E+00		-7.85635588E-03
5.77000000E+02	-1.42235639E+07	1.28395146E+05		-6.14429676E-03	1.10433771E+00		-7.95267910E-03
6.00000000E+02	-1.12376802E+07	1.31158029E+05		-7.08921980E-03	9.09672937E-01		-8.93651598E-03
6.25000000E+02	-7.92772199E+06	1.33522449E+05		-7.86241568E-03	6.75602211E-01		-9.74301355E-03
6.50000000E+02	-4.56759121E+06	1.35163559E+05		-8.36653478E-03	4.24849959E-01		-1.02702469E-02
6.75000000E+02	-1.17590436E+06	1.36042147E+05		-8.59827500E-03	1.64449710E-01		-1.05143616E-02
7.00000000E+02	2.22800452E+06	1.36140061E+05		-8.55586804E-03	-9.84913999E-02		-1.04733337E-02
7.25000000E+02	5.62461249E+06	1.35460354E+05		-8.23911600E-03	-3.56838965E-01		-1.01470083E-02
7.50000000E+02	8.99473832E+06	1.34027299E+05		-7.64938516E-03	-6.03478055E-01		-9.53709360E-03
7.75000000E+02	1.23200728E+07	1.31886721E+05		-6.82015758E-03	-8.30295057E-01		-8.51101298E-03
8.00000000E+02	1.55837825E+07	1.29110747E+05		-5.83910036E-03	-1.03001033E+00		-7.32313193E-03
8.25000000E+02	1.87710400E+07	1.25785921E+05		-4.72323408E-03	-1.19910586E+00		-6.16904926E-03
8.50000000E+02	2.18692696E+07	1.22004585E+05		-3.46112143E-03	-1.33596535E+00		-4.80183115E-03
8.75000000E+02	2.48683089E+07	1.17868739E+05		-2.10665748E-03	-1.43660991E+00		-3.29725081E-03
9.00000000E+02	2.77373347E+07	1.11143306E+05		-6.83253871E-04	-1.49910199E+00		-1.72197635E-03
9.25000000E+02	3.04222664E+07	1.03632555E+05		7.70698327E-04	-1.52156453E+00		-6.50480809E-05
9.50000000E+02	3.29188780E+07	9.61103105E+04		2.21098239E-03	-1.50466390E+00		1.43589924E-03
9.75000000E+02	3.52292715E+07	8.87672719E+04		3.76049963E-03	-1.44887136E+00		3.04463453E-03
9.91000000E+02	3.66131939E+07	8.42533553E+04		4.80565605E-03	-1.39155646E+00		4.12619350E-03
1.00000000E+03	3.73603934E+07	8.18028639E+04		5.41092455E-03	-1.35161682E+00		4.75122404E-03
1.02500000E+03	3.93243299E+07	7.54286533E+04		7.15185679E-03	-1.21055708E+00		6.56257044E-03
1.05000000E+03	4.10209698E+07	1.90386931E+04		8.91658574E-03	-1.02311870E+00		8.76784595E-03

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1.07500000E+03	3.83186613E+07	-2.23276878E+05	1.06518976E-02	-7.57844064E-01	1.23181430E-02
1.10000000E+03	3.05471862E+07	-3.83003878E+05	1.21154421E-02	-4.15110662E-01	1.49110909E-02
1.12500000E+03	2.00022490E+07	-4.42590488E+05	1.30915795E-02	-9.83859871E-03	1.81532624E-02
1.13300000E+03	1.64764585E+07	-4.36480601E+05	1.33400262E-02	1.42324505E-01	2.00038521E-02
1.16000000E+03	6.01081833E+06	-3.19356157E+05	1.39621524E-02	6.83320010E-01	1.96446463E-02
1.19000000E+03	-3.24938368E+05	-1.10509275E+05	1.41441310E-02	1.25644472E+00	2.02160693E-02
1.20600000E+03	-1.25055180E+06	-1.11682674E+04	1.41230252E-02	1.55551834E+00	1.61447970E-02
1.21200000E+03	-1.29128386E+06	-2.48149427E+03	1.41175995E-02	1.64864579E+00	1.41225624E-02
1.22500000E+03	-1.21054944E+06	1.43966401E+04	1.41065995E-02	1.83194086E+00	1.40778062E-02
1.24200000E+03	-8.14775564E+05	3.09661171E+04	1.40948560E-02	2.07085531E+00	1.40329237E-02
1.26418000E+03	-3.07363437E-26	3.97233376E+04	1.40885904E-02	2.38175776E+00	1.40091437E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -5.17755930E-01				
1.26418000E+03	-3.07363437E-26	1.78496571E-07	1.40885904E-02	2.38175776E+00	-2.25800676+315

t220,2

t=220

Mode 4

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
2.25846847E+02	5.10067983E+04	1.56072189E+02	1.56072189E+02	1.40865701E+02	0.	
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN	
3.51200000E+02	0.	0.	1.00934172E-02	7.17896478E-01	1.00934172E-02	
3.75000000E+02	-6.57814773E+07	4.78980642E+05	-3.73094897E-04	7.15506769E-01	-4.80234921E-03	
3.85000000E+02	-6.09907565E+07	4.79116836E+05	-4.05930590E-03	6.50155961E-01	-8.20391520E-03	
4.00000000E+02	-5.37703663E+07	4.83408641E+05	-8.46775577E-03	4.94310638E-01	-1.23474399E-02	
4.25000000E+02	-4.16270408E+07	4.87234519E+05	-1.40729345E-02	9.75064846E-02	-1.97154882E-02	
4.50000000E+02	-2.94579570E+07	4.85156016E+05	-1.84147796E-02	-4.56476490E-01	-2.52672657E-02	
4.75000000E+02	-1.74331665E+07	4.75466758E+05	-2.11197035E-02	-1.11445837E+00	-2.70078368E-02	
5.00000000E+02	-5.75409092E+06	4.57458300E+05	-2.21104673E-02	-1.79294887E+00	-2.71374816E-02	
5.25000000E+02	5.37000094E+06	4.31091047E+05	-2.21370563E-02	-2.45968272E+00	-2.52343793E-02	
5.50000000E+02	1.57332342E+07	3.96589484E+05	-2.14011338E-02	-3.12295408E+00	-2.69869012E-02	
5.75000000E+02	2.51301871E+07	3.53827568E+05	-1.97462289E-02	-3.77122687E+00	-2.47297158E-02	
5.77000000E+02	2.58340884E+07	3.50065600E+05	-1.95818240E-02	-3.82046978E+00	-2.45123254E-02	
6.00000000E+02	3.33608921E+07	3.03427847E+05	-1.73792475E-02	-4.35260406E+00	-2.16528792E-02	
6.25000000E+02	4.02457854E+07	2.46340277E+05	-1.44016420E-02	-4.84799263E+00	-1.78712233E-02	
6.50000000E+02	4.56318551E+07	1.83732669E+05	-1.09283117E-02	-5.24138241E+00	-1.35160957E-02	
6.75000000E+02	4.93975897E+07	1.16950097E+05	-7.08525523E-03	-5.52022342E+00	-8.73243969E-03	
7.00000000E+02	5.14568571E+07	4.74700834E+04	-3.00686626E-03	-5.67572480E+00	-3.67545899E-03	
7.25000000E+02	5.17616220E+07	-2.31453662E+04	1.16703744E-03	-5.70306635E+00	1.49302851E-03	
7.50000000E+02	5.03034353E+07	-9.32997848E+04	5.29435469E-03	-5.60151603E+00	6.60843617E-03	
7.75000000E+02	4.71136546E+07	-1.61415900E+05	9.11092582E-03	-5.37622748E+00	1.11803604E-02	
8.00000000E+02	4.22614922E+07	-2.26075010E+05	1.22681491E-02	-5.04676666E+00	1.48667124E-02	
8.25000000E+02	3.58483797E+07	-2.86120706E+05	1.48123090E-02	-4.63367916E+00	1.81010528E-02	
8.50000000E+02	2.80019500E+07	-3.40596497E+05	1.68036334E-02	-4.15065715E+00	2.05464520E-02	
8.75000000E+02	1.88713125E+07	-3.88755622E+05	1.81727420E-02	-3.61799231E+00	2.20995665E-02	
9.00000000E+02	8.39929313E+06	-4.51774003E+05	1.89233792E-02	-3.05236043E+00	2.31455662E-02	
9.25000000E+02	-3.63264524E+06	-5.08771110E+05	1.90586097E-02	-2.46961288E+00	2.31616025E-02	
9.50000000E+02	-1.69394302E+07	-5.53777459E+05	1.85953244E-02	-1.89036538E+00	2.30612716E-02	
9.75000000E+02	-3.12224739E+07	-5.86911228E+05	1.75038727E-02	-1.32258659E+00	2.22370278E-02	
9.91000000E+02	-4.07404479E+07	-6.02067182E+05	1.64577271E-02	-9.73766733E-01	2.13131076E-02	
1.00000000E+03	-4.61895001E+07	-6.08599348E+05	1.57465623E-02	-7.84836601E-01	2.06546215E-02	
1.02500000E+03	-6.15637604E+07	-6.19659465E+05	1.33025778E-02	-2.96483147E-01	1.81436674E-02	
1.05000000E+03	-7.70598481E+07	-6.03997421E+05	1.02620689E-02	1.20556515E-01	1.49807988E-02	

t=220, 4/308

1.07500000E+03	-8.88695644E+07	-2.84031200E+05	6.65186366E-03	4.22888178E-01	8.77149948E-03
1.10000000E+03	-8.92315312E+07	2.77850040E+05	2.85719582E-03	5.44353303E-01	8.29093335E-04
1.12500000E+03	-7.47558731E+07	8.70124736E+05	-3.50731757E-04	4.47252872E-01	-1.03019070E-02
1.13300000E+03	-6.71445028E+07	1.02580576E+06	-1.31914879E-03	3.39915328E-01	-1.69803054E-02
1.16000000E+03	-3.59493094E+07	1.13610371E+06	-4.28780786E-03	-2.50976864E-01	-2.45031764E-02
1.19000000E+03	-9.15723280E+06	6.03174285E+05	-6.01815553E-03	-1.07371984E+00	-3.91595997E-02
1.20600000E+03	-2.79074532E+06	2.00435671E+05	-6.19476835E-03	-1.71391028E+00	-4.24792852E-02
1.21200000E+03	-1.71285647E+06	1.58600284E+05	-6.20434477E-03	-1.95031338E+00	-6.52154534E-03
1.22500000E+03	-1.95720829E+05	7.80639864E+04	-6.21185875E-03	-2.03406722E+00	-6.36798672E-03
1.24200000E+03	4.49356281E+05	4.04599900E+03	-6.20923183E-03	-2.14094689E+00	-6.21732383E-03
1.26418000E+03	9.27859451E-27	-3.26034857E+04	-6.20490360E-03	-2.27770804E+00	-6.13969662E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =				1.02108439E-01
1.26418000E+03	9.27859451E-27	2.84609466E-08	-6.20490360E-03	-2.27770804E+00	-3.60034983+314

t220,4

t=220

Mode 5

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
3.19092509E+02	1.01820029E+05	1.56072189E+02	1.56072189E+02	1.54717863E+02	0.	

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.		2.96738538E-03	2.87841848E-01	2.96738538E-03	
3.75000000E+02	-3.57917525E+07	3.83211587E+05		-2.94105308E-03	1.93595345E-01	-6.48470689E-03	
3.85000000E+02	-3.19591779E+07	3.83278110E+05		-4.91136576E-03	1.19820579E-01	-8.22692035E-03	
4.00000000E+02	-2.62015675E+07	3.84058125E+05		-7.14799654E-03	-1.96740265E-02	-1.02303250E-02	
4.25000000E+02	-1.66352019E+07	3.80008181E+05		-9.66847382E-03	-3.20008104E-01	-1.40692634E-02	
4.50000000E+02	-7.27105659E+06	3.67594249E+05		-1.11236600E-02	-6.93794084E-01	-1.63156692E-02	
4.75000000E+02	1.66240161E+06	3.45419606E+05		-1.14657805E-02	-1.09676589E+00	-1.57434226E-02	
5.00000000E+02	9.91904990E+06	3.13556129E+05		-1.09955255E-02	-1.47444943E+00	-1.44411972E-02	
5.25000000E+02	1.72661291E+07	2.72811734E+05		-1.01570709E-02	-1.81343651E+00	-1.21171813E-02	
5.50000000E+02	2.34944795E+07	2.24167132E+05		-8.80450773E-03	-2.12311760E+00	-1.19617913E-02	
5.75000000E+02	2.84133104E+07	1.68250726E+05		-6.70205253E-03	-2.38705575E+00	-9.07178107E-03	
5.77000000E+02	2.87450775E+07	1.63510469E+05		-6.51766554E-03	-2.40494860E+00	-8.82062988E-03	
6.00000000E+02	3.18603840E+07	1.06747303E+05		-4.26132310E-03	-2.57322771E+00	-5.76480625E-03	
6.25000000E+02	3.37210425E+07	4.16935059E+04		-1.60597534E-03	-2.67308817E+00	-2.19320782E-03	
6.50000000E+02	3.39337859E+07	-2.47109114E+04		1.13320441E-03	-2.68202994E+00	1.48124541E-03	
6.75000000E+02	3.24931122E+07	-9.02027905E+04		3.82271742E-03	-2.59954756E+00	5.09317925E-03	
7.00000000E+02	2.94498289E+07	-1.52557503E+05		6.33089826E-03	-2.42925264E+00	8.47959549E-03	
7.25000000E+02	2.49088270E+07	-2.09689417E+05		8.53238306E-03	-2.17874051E+00	1.14857551E-02	
7.50000000E+02	1.90243999E+07	-2.59747280E+05		1.03122983E-02	-1.85931358E+00	1.39707107E-02	
7.75000000E+02	1.19932547E+07	-3.01210394E+05		1.15363392E-02	-1.48831228E+00	1.53980109E-02	
8.00000000E+02	4.04335853E+06	-3.33139892E+05		1.21089377E-02	-1.09134574E+00	1.59381318E-02	
8.25000000E+02	-4.58115409E+06	-3.55159703E+05		1.20944559E-02	-6.88503741E-01	1.61767514E-02	
8.50000000E+02	-1.36317701E+07	-3.67255931E+05		1.15319154E-02	-2.92034091E-01	1.55676949E-02	
8.75000000E+02	-2.28642686E+07	-3.69816059E+05		1.04780330E-02	7.92383051E-02	1.42135487E-02	
9.00000000E+02	-3.20180760E+07	-3.59914040E+05		8.99568722E-03	4.11431078E-01	1.23593698E-02	
9.25000000E+02	-4.07530811E+07	-3.36957801E+05		7.17947355E-03	6.91455550E-01	9.89687518E-03	
9.50000000E+02	-4.87806292E+07	-3.03737012E+05		5.14146715E-03	9.10966108E-01	7.59095918E-03	
9.75000000E+02	-5.58749232E+07	-2.62729519E+05		2.75904453E-03	1.06760659E+00	4.87783097E-03	
9.91000000E+02	-5.98483413E+07	-2.33671272E+05		1.07466964E-03	1.13047413E+00	2.95911539E-03	
1.00000000E+03	-6.18753641E+07	-2.16725001E+05		7.85405908E-05	1.15203540E+00	1.82632286E-03	
1.02500000E+03	-6.66956018E+07	-1.68861114E+05		-2.84381485E-03	1.15670503E+00	-1.52458740E-03	
1.05000000E+03	-6.93163634E+07	3.16771403E+05		-5.85028968E-03	1.06880445E+00	-8.32506627E-03	

1.07500000E+03	-3.45620428E+07	2.29702684E+06	-8.27724990E-03	6.26764320E-01	-2.54192413E-02
1.10000000E+03	3.39675631E+07	2.91416077E+06	-8.35632829E-03	-9.29447663E-02	-2.96275747E-02
1.12500000E+03	9.75925658E+07	1.88589069E+06	-5.70428478E-03	-8.01292964E-01	-2.72722601E-02
1.13300000E+03	1.09956822E+08	1.17914480E+06	-4.28212164E-03	-1.00240730E+00	-2.22843323E-02
1.16000000E+03	1.02237047E+08	-1.46909034E+06	2.26269796E-03	-8.93845287E-01	2.84030954E-02
1.19000000E+03	4.06732078E+07	-2.05483676E+06	8.27436223E-03	9.42846602E-01	1.21177481E-01
1.20600000E+03	1.60037564E+07	-9.20643380E+05	9.11478078E-03	3.24051229E+00	1.75777232E-01
1.21200000E+03	1.09816551E+07	-7.47947862E+05	9.17222024E-03	4.22121865E+00	1.06681160E-02
1.22500000E+03	3.60357703E+06	-4.01762083E+05	9.23217141E-03	4.35567262E+00	1.00356956E-02
1.24200000E+03	-3.23633427E+05	-8.73924486E+04	9.24570646E-03	4.52065161E+00	9.42049136E-03
1.26418000E+03	-2.97621495E-26	6.61542609E+04	9.23910422E-03	4.72498942E+00	9.10679570E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -1.03788748E-01				
1.26418000E+03	-2.97621495E-26	5.06382140E-09	9.23910422E-03	4.72498942E+00	-6.40580539+313

+220,5

t=260

Mode 1

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS.	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.30073322E+01	1.84963063E+03	1.30629637E+02	1.30629637E+02	2.17441781E+01	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-6.71038229E-03	5.02615189E-01	-6.71038229E-03
3.75000000E+02	2.16411902E+06	1.21256106E+04	-6.41449802E-03	3.43419698E-01	-6.52662659E-03
3.85000000E+02	2.28538284E+06	1.21271009E+04	-6.28518421E-03	2.78836811E-01	-6.39008993E-03
4.00000000E+02	2.46778394E+06	1.21894714E+04	-6.10320765E-03	1.84431536E-01	-6.20103647E-03
4.25000000E+02	2.77327430E+06	1.22387122E+04	-5.79650162E-03	3.29054347E-02	-5.93822730E-03
4.50000000E+02	3.07913577E+06	1.22201154E+04	-5.42846923E-03	-1.11287195E-01	-5.61106973E-03
4.75000000E+02	3.38375600E+06	1.21393816E+04	-5.07148787E-03	-2.46509952E-01	-5.22182077E-03
5.00000000E+02	3.68561587E+06	1.19999428E+04	-4.77713147E-03	-3.72970891E-01	-4.90899898E-03
5.25000000E+02	3.98329363E+06	1.18053435E+04	-4.53918940E-03	-4.92308106E-01	-4.62400898E-03
5.50000000E+02	4.27544774E+06	1.15584355E+04	-4.27113952E-03	-6.06269069E-01	-4.43393438E-03
5.75000000E+02	4.56080084E+06	1.12618466E+04	-3.91478933E-03	-7.12660183E-01	-4.07340689E-03
5.77000000E+02	4.58329883E+06	1.12360887E+04	-3.88529221E-03	-7.20777162E-01	-4.04354698E-03
6.00000000E+02	4.83815895E+06	1.09195321E+04	-3.53574149E-03	-8.09744872E-01	-3.68953772E-03
6.25000000E+02	5.10643225E+06	1.05358025E+04	-3.13468543E-03	-8.96948782E-01	-3.28307702E-03
6.50000000E+02	5.36464191E+06	1.01152218E+04	-2.71239402E-03	-9.73717415E-01	-2.85486194E-03
6.75000000E+02	5.61192625E+06	9.66259838E+03	-2.26971441E-03	-1.03951820E+00	-2.40580735E-03
7.00000000E+02	5.84754676E+06	9.18257450E+03	-1.81755829E-03	-1.09384229E+00	-1.93689596E-03
7.25000000E+02	6.07089379E+06	8.68161542E+03	-1.32689176E-03	-1.13620618E+00	-1.44916804E-03
7.50000000E+02	6.28149199E+06	8.16399768E+03	-8.28724711E-04	-1.16615294E+00	-9.43710594E-04
7.75000000E+02	6.47900544E+06	7.63579877E+03	-3.30750364E-04	-1.18324329E+00	-4.28645220E-04
8.00000000E+02	6.66324151E+06	7.10272945E+03	1.31786906E-04	-1.18800929E+00	5.01463379E-05
8.25000000E+02	6.83414614E+06	6.57014802E+03	5.70085837E-04	-1.18122343E+00	4.94566894E-04
8.50000000E+02	6.99179520E+06	6.04311665E+03	9.99513770E-04	-1.16333705E+00	9.33105894E-04
8.75000000E+02	7.13638931E+06	5.52656124E+03	1.40920451E-03	-1.13465915E+00	1.35338066E-03
9.00000000E+02	7.26557240E+06	4.75872756E+03	1.79908412E-03	-1.09572761E+00	1.75461003E-03
9.25000000E+02	7.37443018E+06	3.95597905E+03	2.16542892E-03	-1.04700111E+00	2.13352587E-03
9.50000000E+02	7.46370389E+06	3.19310759E+03	2.50273149E-03	-9.89377508E-01	2.47698063E-03
9.75000000E+02	7.53447196E+06	2.47660515E+03	2.84366699E-03	-9.23124937E-01	2.82369436E-03
9.91000000E+02	7.57061777E+06	2.04537252E+03	3.06339411E-03	-8.76161349E-01	3.04689917E-03
1.00000000E+03	7.58797461E+06	1.81296014E+03	3.18742181E-03	-8.48172865E-01	3.17280116E-03
1.02500000E+03	7.62561488E+06	1.20870587E+03	3.53275599E-03	-7.64471610E-01	3.52331298E-03
1.05000000E+03	7.64895926E+06	6.70365358E+02	3.86777392E-03	-6.72149495E-01	3.86253669E-03

TRW SYSTEMS

1.07500000E+03	7.65973562E+06	2.04318443E+02	4.19836648E-03	-5.71380303E-01	4.19684171E-03
1.10000000E+03	7.44394933E+06	-1.86820834E+04	4.51780719E-03	-4.60792950E-01	4.65417276E-03
1.12500000E+03	6.76183635E+06	-3.52591254E+04	4.79316242E-03	-3.38507601E-01	5.19640316E-03
1.13300000E+03	6.46135452E+06	-3.97605551E+04	4.88333978E-03	-2.95833526E-01	5.49037115E-03
1.16000000E+03	5.21709255E+06	-5.00817527E+04	5.22485348E-03	-1.39015910E-01	6.11598787E-03
1.19000000E+03	3.66632614E+06	-5.19810216E+04	5.59638710E-03	6.46423624E-02	8.45248719E-03
1.20600000E+03	2.84490629E+06	-5.05501293E+04	5.68902829E-03	2.32565758E-01	1.48400293E-02
1.21200000E+03	2.54229579E+06	-5.03058695E+04	5.70051686E-03	3.21216000E-01	5.80112860E-03
1.22500000E+03	1.89252698E+06	-4.96350360E+04	5.71972812E-03	3.96753231E-01	5.81899820E-03
1.24200000E+03	1.05765836E+06	-4.85444531E+04	5.73642833E-03	4.95813703E-01	5.83351724E-03
1.25000000E+03	6.71655109E+05	-4.79474119E+04	5.74103771E-03	5.42496946E-01	5.83693254E-03
1.26418000E+03	1.52253494E-28	-4.67572016E+04	5.74419911E-03	6.25278088E-01	5.83771351E-03
1.26418000E+03	TOTAL DEFLECTION OF THE SPRING MASS SYSTEM = 4.03821251E+00				
1.26418000E+03	1.52253494E-28	1.02240167E-09	5.74419911E-03	6.25278088E-01	-1.29335251+313

t260,1

t=260

Mode 2

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.47113808E+01	4.18756280E+03	1.30629637E+02	1.30629637E+02	5.71860461E+01	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.		-1.94829754E-02	3.27714870E-01	-1.94829754E-02
3.75000000E+02	1.27500806E+07	1.78908393E+04		-1.76467355E-02	-1.18613374E-01	-1.78121766E-02
3.85000000E+02	1.29289793E+07	1.78886002E+04		-1.69003176E-02	-2.92926765E-01	-1.70550633E-02
4.00000000E+02	1.31955835E+07	1.76334035E+04		-1.58991729E-02	-5.40929776E-01	-1.60406930E-02
4.25000000E+02	1.36278833E+07	1.68859307E+04		-1.43278585E-02	-9.22405249E-01	-1.45234107E-02
4.50000000E+02	1.40368122E+07	1.57703937E+04		-1.26355779E-02	-1.26456154E+00	-1.28583236E-02
4.75000000E+02	1.44136811E+07	1.43263668E+04		-1.10167907E-02	-1.56417910E+00	-1.11942317E-02
5.00000000E+02	1.47508549E+07	1.26009235E+04		-9.80018937E-03	-1.82754443E+00	-9.93866105E-03
5.25000000E+02	1.50416189E+07	1.06202412E+04		-8.87425703E-03	-2.06334457E+00	-8.95056184E-03
5.50000000E+02	1.52799622E+07	8.41083762E+03		-7.89395892E-03	-2.27745074E+00	-8.01242142E-03
5.75000000E+02	1.54604642E+07	5.99805687E+03		-6.65402014E-03	-2.46187310E+00	-6.73849981E-03
5.77000000E+02	1.54722596E+07	5.79720215E+03		-6.55423694E-03	-2.47524750E+00	-6.63588768E-03
6.00000000E+02	1.55784374E+07	3.41397086E+03		-5.40201729E-03	-2.61425499E+00	-5.45010138E-03
6.25000000E+02	1.56300080E+07	6.91326962E+02		-4.14315471E-03	-2.73430466E+00	-4.15289171E-03
6.50000000E+02	1.56121239E+07	-2.13690404E+03		-2.88291607E-03	-2.82187566E+00	-2.85281883E-03
6.75000000E+02	1.55225583E+07	-5.03767900E+03		-1.62699789E-03	-2.87697305E+00	-1.55604467E-03
7.00000000E+02	1.53599101E+07	-7.97803896E+03		-3.81242976E-04	-2.89975792E+00	-2.68876230E-04
7.25000000E+02	1.51235992E+07	-1.09252694E+04		8.48426036E-04	-2.89055010E+00	1.00230307E-03
7.50000000E+02	1.48138588E+07	-1.38470622E+04		2.05607257E-03	-2.84982929E+00	2.25110162E-03
7.75000000E+02	1.44317227E+07	-1.67117113E+04		3.19841955E-03	-2.77850973E+00	3.41267226E-03
8.00000000E+02	1.39789958E+07	-1.94897499E+04		4.19893770E-03	-2.68012054E+00	4.42295781E-03
8.25000000E+02	1.34581724E+07	-2.21554117E+04		5.09011551E-03	-2.55795043E+00	5.34477541E-03
8.50000000E+02	1.28723558E+07	-2.46854928E+04		5.90827740E-03	-2.41386698E+00	6.17954655E-03
8.75000000E+02	1.22252051E+07	-2.70588166E+04		6.63663873E-03	-2.25016560E+00	6.90996011E-03
9.00000000E+02	1.15091215E+07	-3.04190978E+04		7.27985082E-03	-2.06910538E+00	7.56414146E-03
9.25000000E+02	1.07061654E+07	-3.37618636E+04		7.83678027E-03	-1.87271400E+00	8.10905336E-03
9.50000000E+02	9.82389255E+06	-3.67609276E+04		8.30365653E-03	-1.66375987E+00	8.60011562E-03
9.75000000E+02	8.87115534E+06	-3.93956992E+04		8.72879351E-03	-1.44308065E+00	9.04650076E-03
9.91000000E+02	8.22872165E+06	-4.08819585E+04		8.97757665E-03	-1.29622385E+00	9.30726986E-03
1.00000000E+03	7.85730149E+06	-4.16472727E+04		9.10919896E-03	-1.21183348E+00	9.44506406E-03
1.02500000E+03	6.79212630E+06	-4.34987681E+04		9.44188115E-03	-9.71259709E-01	9.78171528E-03
1.05000000E+03	5.68581783E+06	-4.49357796E+04		9.71565160E-03	-7.23046411E-01	1.00667124E-02

SIS

t260,2

1.07500000E+03	4.54889077E+06	-4.59465063E+04	9.93688825E-03	-4.68627296E-01	1.02797726E-02
1.10000000E+03	3.05408429E+06	-7.32037161E+04	1.00996771E-02	-2.06999364E-01	1.06340107E-02
1.12500000E+03	1.08812854E+06	-7.98709714E+04	1.01792977E-02	6.32862830E-02	1.10927415E-02
1.13300000E+03	4.61110703E+05	-7.64036766E+04	1.01897925E-02	1.53015909E-01	1.13562608E-02
1.16000000E+03	-1.23675535E+06	-4.63910846E+04	1.01594013E-02	4.55775975E-01	1.09848654E-02
1.19000000E+03	-1.90986702E+06	-6.93761296E+02	1.00156663E-02	7.72627316E-01	1.00537851E-02
1.20600000E+03	-1.74649082E+06	1.97387232E+04	9.96415794E-03	9.13926268E-01	6.39089161E-03
1.21200000E+03	-1.62264127E+06	2.15553869E+04	9.95697368E-03	9.51632453E-01	9.91386290E-03
1.22500000E+03	-1.31506938E+06	2.58541470E+04	9.94420324E-03	1.18037207E+00	9.89249494E-03
1.24200000E+03	-8.22105810E+05	3.22964424E+04	9.93198914E-03	1.24832587E+00	9.86739626E-03
1.25000000E+03	-5.50459410E+05	3.56493947E+04	9.92831705E-03	1.32722283E+00	9.85701826E-03
1.26418000E+03	0.	4.20968698E+04	9.92564319E-03	1.46688034E+00	9.84144945E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -1.60588388E+00				
1.26418000E+03	0.	-1.13711833E-09	9.92564319E-03	1.46688034E+00	1.43847071+313

t260,2

t=260

Mode 3

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.18276931E+02	1.39894325E+04	1.30629637E+02	1.30629637E+02	8.16537456E+01	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	1.77798340E-02	5.69102363E-01	1.77798340E-02
3.75000000E+02	-3.50403636E+07	1.03888101E+05	1.24674490E-02	9.03509066E-01	1.15067696E-02
3.85000000E+02	-3.40013122E+07	1.03922811E+05	1.04602542E-02	1.00873308E+00	9.56126791E-03
4.00000000E+02	-3.24263676E+07	1.06111895E+05	7.91170903E-03	1.13264342E+00	7.06008868E-03
4.25000000E+02	-2.97233395E+07	1.10201366E+05	4.26593634E-03	1.25863099E+00	2.98971902E-03
4.50000000E+02	-2.69141091E+07	1.14554223E+05	8.02306780E-04	1.28801490E+00	-8.15690723E-04
4.75000000E+02	-2.39961201E+07	1.18851997E+05	-2.10610112E-03	1.23044301E+00	-3.57795248E-03
5.00000000E+02	-2.09740074E+07	1.22852898E+05	-3.99022752E-03	1.11743365E+00	-5.34025937E-03
5.25000000E+02	-1.78572201E+07	1.26406370E+05	-5.20288579E-03	9.69931630E-01	-6.11109616E-03
5.50000000E+02	-1.46581671E+07	1.29416883E+05	-6.23757189E-03	7.92245476E-01	-8.06034490E-03
5.75000000E+02	-1.13920535E+07	1.31750048E+05	-7.28837625E-03	5.76620734E-01	-9.14401072E-03
5.77000000E+02	-1.11283983E+07	1.31904290E+05	-7.36102303E-03	5.58257598E-01	-9.21882993E-03
6.00000000E+02	-8.07712771E+06	1.33308456E+05	-8.07368588E-03	3.37348867E-01	-9.95126977E-03
6.25000000E+02	-4.73366488E+06	1.34023567E+05	-8.59037035E-03	8.13953446E-02	-1.04780262E-02
6.50000000E+02	-1.38335638E+06	1.33850651E+05	-8.83699544E-03	-1.84197117E-01	-1.07222159E-02
6.75000000E+02	1.95128780E+06	1.32768966E+05	-8.81391323E-03	-4.52360609E-01	-1.06838987E-02
7.00000000E+02	5.24753908E+06	1.30781751E+05	-8.52330401E-03	-7.16055762E-01	-1.03653005E-02
7.25000000E+02	8.48304786E+06	1.27916036E+05	-7.96916971E-03	-9.68325885E-01	-9.77080402E-03
7.50000000E+02	1.16364340E+07	1.24222275E+05	-7.15727950E-03	-1.20235024E+00	-8.90688901E-03
7.75000000E+02	1.46878671E+07	1.19774258E+05	-6.13188648E-03	-1.41055721E+00	-7.66745389E-03
8.00000000E+02	1.76197042E+07	1.14672634E+05	-4.99535254E-03	-1.58687119E+00	-6.31342879E-03
8.25000000E+02	2.04169993E+07	1.09035544E+05	-3.75963113E-03	-1.72883975E+00	-5.01285578E-03
8.50000000E+02	2.30676988E+07	1.02965048E+05	-2.40881129E-03	-1.83549239E+00	-3.54029533E-03
8.75000000E+02	2.55627617E+07	9.66013821E+04	-9.98964196E-04	-1.90387086E+00	-1.97473573E-03
9.00000000E+02	2.78615561E+07	8.65833953E+04	4.47260446E-04	-1.93283860E+00	-3.61930167E-04
9.25000000E+02	2.98893479E+07	7.56506145E+04	1.89188895E-03	-1.92126590E+00	1.28180174E-03
9.50000000E+02	3.16455927E+07	6.48963716E+04	3.29142905E-03	-1.87080399E+00	2.76807121E-03
9.75000000E+02	3.31374362E+07	5.45346387E+04	4.76475216E-03	-1.78227398E+00	4.32495668E-03
9.91000000E+02	3.39590240E+07	4.82105831E+04	5.74094599E-03	-1.70488597E+00	5.35215096E-03
1.00000000E+03	3.43774304E+07	4.47858654E+04	6.30010445E-03	-1.65408062E+00	5.93892812E-03
1.02500000E+03	3.53837385E+07	3.58783908E+04	7.88417323E-03	-1.48495164E+00	7.60387330E-03
1.05000000E+03	3.61803103E+07	2.80459556E+04	9.45427627E-03	-1.27451698E+00	9.23516724E-03

t260,3

1.07500000E+03	3.67969330E+07	2.15211948E+04	1.10305367E-02	-1.02308409E+00	1.08699308E-02
1.10000000E+03	3.44663926E+07	-2.18441668E+05	1.25524577E-02	-7.10858225E-01	1.41469225E-02
1.12500000E+03	2.67389622E+07	-3.81026607E+05	1.37439186E-02	-3.15014540E-01	1.81015266E-02
1.15000000E+03	2.35768738E+07	-4.06768007E+05	1.40870150E-02	-1.61969014E-01	2.02972136E-02
1.16000000E+03	1.25797812E+07	-3.73924128E+05	1.51195424E-02	4.13590735E-01	2.17729967E-02
1.19000000E+03	3.98610236E+06	-1.95565705E+05	1.57615349E-02	1.09069219E+00	2.65069033E-02
1.20600000E+03	1.72662895E+06	-9.09610567E+04	1.58456726E-02	1.54193308E+00	3.23121927E-02
1.21200000E+03	1.21243971E+06	-8.02120118E+04	1.58519435E-02	1.73090930E+00	1.60123675E-02
1.22500000E+03	3.35079194E+05	-5.42768196E+04	1.58584059E-02	1.93878953E+00	1.59669596E-02
1.24200000E+03	-2.68825631E+05	-1.59365536E+04	1.58581658E-02	2.20959791E+00	1.58900389E-02
1.25000000E+03	-3.17967561E+05	3.83511532E+03	1.58565307E-02	2.33655515E+00	1.58488605E-02
1.26418000E+03	4.59717228E-28	4.15882895E+04	1.58546060E-02	2.56074763E+00	1.57714295E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =	-4.74893940E-01			
1.26418000E+03	4.59717228E-28	-4.85481208E-09	1.58546060E-02	2.56074763E+00	6.14140565+313

t260,3

t=260

Mode 4

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
2.16947662E+02	4.70662881E+04	1.30629637E+02	1.30629637E+02	1.18335946E+02	0.	

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.		9.05346249E-03	6.21087930E-01	9.05346249E-03	
3.75000000E+02	-5.48364075E+07	3.81366912E+05		3.59217369E-04	6.39007771E-01	-3.16737827E-03	
3.85000000E+02	-5.10223568E+07	3.81442302E+05		-2.71883940E-03	5.92819988E-01	-6.01851329E-03	
4.00000000E+02	-4.52720234E+07	3.85133975E+05		-6.41753654E-03	4.74961200E-01	-9.50849942E-03	
4.25000000E+02	-3.55890576E+07	3.88906888E+05		-1.11680104E-02	1.63331804E-01	-1.56718539E-02	
4.50000000E+02	-2.58628572E+07	3.88348301E+05		-1.49220933E-02	-2.80977378E-01	-2.04072388E-02	
4.75000000E+02	-1.62192927E+07	3.82116295E+05		-1.73465852E-02	-8.15869395E-01	-2.20786755E-02	
5.00000000E+02	-6.80944346E+06	3.69609734E+05		-1.83265840E-02	-1.37317775E+00	-2.23882295E-02	
5.25000000E+02	2.20809883E+06	3.50740326E+05		-1.84818248E-02	-1.92548125E+00	-2.10018402E-02	
5.50000000E+02	1.06759859E+07	3.25629993E+05		-1.80216592E-02	-2.47884767E+00	-2.26079971E-02	
5.75000000E+02	1.84360293E+07	2.94131947E+05		-1.68424944E-02	-3.02525014E+00	-2.09851979E-02	
5.77000000E+02	1.90215138E+07	2.91346212E+05		-1.67216606E-02	-3.06706119E+00	-2.08251284E-02	
6.00000000E+02	2.53326863E+07	2.56652845E+05		-1.50713282E-02	-3.52246802E+00	-1.86861570E-02	
6.25000000E+02	3.12242398E+07	2.13847693E+05		-1.27836132E-02	-3.95462457E+00	-1.57955525E-02	
6.50000000E+02	3.59875116E+07	1.66540239E+05		-1.00655112E-02	-4.30812750E+00	-1.24111484E-02	
6.75000000E+02	3.95217397E+07	1.15695090E+05		-7.01223808E-03	-4.57197120E+00	-8.64174639E-03	
7.00000000E+02	4.17517171E+07	6.23866705E+04		-3.72612322E-03	-4.73798363E+00	-4.60480872E-03	
7.25000000E+02	4.26301236E+07	7.76571648E+03		-3.14449672E-04	-4.80101034E+00	-4.23825960E-04	
7.50000000E+02	4.21389956E+07	-4.69759457E+04		3.11286023E-03	-4.75903037E+00	3.77449327E-03	
7.75000000E+02	4.02902987E+07	-1.00643222E+05		6.34080222E-03	-4.61439322E+00	7.63109994E-03	
8.00000000E+02	3.71249950E+07	-1.52135314E+05		9.07441683E-03	-4.38102869E+00	1.08230986E-02	
8.25000000E+02	3.27093632E+07	-2.00530786E+05		1.13483148E-02	-4.07439262E+00	1.36532663E-02	
8.50000000E+02	2.71308211E+07	-2.45048703E+05		1.32134301E-02	-3.70490514E+00	1.59062730E-02	
8.75000000E+02	2.04946249E+07	-2.85052834E+05		1.46022560E-02	-3.28776228E+00	1.74815776E-02	
9.00000000E+02	1.27319527E+07	-3.38485839E+05		1.55116845E-02	-2.83571607E+00	1.86751036E-02	
9.25000000E+02	3.63202527E+06	-3.87997236E+05		1.59339130E-02	-2.36087641E+00	1.90629230E-02	
9.50000000E+02	-6.59210811E+06	-4.28405516E+05		1.58704651E-02	-1.87990047E+00	1.93253483E-02	
9.75000000E+02	-1.77116544E+07	-4.59631342E+05		1.53210636E-02	-1.39927928E+00	1.90277680E-02	
9.91000000E+02	-2.51924068E+07	-4.74851405E+05		1.46975949E-02	-1.09851118E+00	1.85270417E-02	
1.00000000E+03	-2.94982669E+07	-4.81817816E+05		1.42502113E-02	-9.33468542E-01	1.81358388E-02	
1.02500000E+03	-4.17306814E+07	-4.95390678E+05		1.26353022E-02	-4.97749005E-01	1.65055419E-02	
1.05000000E+03	-5.42021616E+07	-5.01094445E+05		1.05320316E-02	-1.09584065E-01	1.44468320E-02	

t=260, 619

1.07500000E+03	-6.67282503E+07	-4.99954933E+05	7.92243515E-03	2.17254749E-01	-1.16534421E-02
1.10000000E+03	-7.58122471E+07	-1.66870908E+05	4.89582122E-03	4.45231679E-01	6.11385704E-03
1.12500000E+03	-7.37127044E+07	3.53782257E+05	1.96733012E-03	5.08718825E-01	-2.07869812E-03
1.13300000E+03	-7.01603875E+07	5.32211902E+05	9.85017803E-04	4.73298224E-01	-7.14035474E-03
1.16000000E+03	-4.90738511E+07	9.14889005E+05	-2.51551510E-03	1.04238559E-01	-1.87946789E-02
1.19000000E+03	-2.26987926E+07	7.60310752E+05	-5.45111372E-03	-7.03226206E-01	-4.72264298E-02
1.20600000E+03	-1.28286326E+07	4.60206972E+05	-5.96883695E-03	-1.68334380E+00	-8.92792953E-02
1.21200000E+03	-1.01923980E+07	4.16340341E+05	-6.01793807E-03	-2.19936506E+00	-6.85061875E-03
1.22500000E+03	-5.46893230E+06	3.09647980E+05	-6.08480211E-03	-2.28752415E+00	-6.70409807E-03
1.24200000E+03	-1.43396332E+06	1.63894506E+05	-6.12157832E-03	-2.39941312E+00	-6.44936733E-03
1.25000000E+03	-4.05675910E+05	9.29283897E+04	-6.12623171E-03	-2.45046459E+00	-6.31208849E-03
1.26418000E+03	-1.25427709E-28	-3.64684235E+04	-6.12670374E-03	-2.53815379E+00	-6.05376689E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 1.23774935E-01				
1.26418000E+03	-1.25427709E-28	7.72824447E-09	-6.12670374E-03	-2.53815379E+00	-9.77633809+313

ε260,4

t=260

Mode 5

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.10946427E+02	9.66876802E+04	1.30629637E+02	1.30629637E+02	1.29418658E+02	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	2.83134766E-03	2.69967811E-01	2.83134766E-03
3.75000000E+02	-3.26172561E+07	3.40500212E+05	-2.53811521E-03	1.89365609E-01	-5.68680620E-03
3.85000000E+02	-2.92120424E+07	3.40539832E+05	-4.33619483E-03	1.24327936E-01	-7.28204112E-03
4.00000000E+02	-2.40949314E+07	3.41450235E+05	-6.38599166E-03	3.03924507E-04	-9.12636273E-03
4.25000000E+02	-1.55832118E+07	3.38429999E+05	-8.72037544E-03	-2.68742550E-01	-1.26396574E-02
4.50000000E+02	-7.23308836E+06	3.28270869E+05	-1.01098669E-02	-6.05670912E-01	-1.47464611E-02
4.75000000E+02	7.59839365E+05	3.09730894E+05	-1.04991113E-02	-9.71241422E-01	-1.43347880E-02
5.00000000E+02	8.18353235E+06	2.82814145E+05	-1.01379289E-02	-1.31637998E+00	-1.32457767E-02
5.25000000E+02	1.48360244E+07	2.48162411E+05	-9.42863312E-03	-1.62851549E+00	-1.12116420E-02
5.50000000E+02	2.05344486E+07	2.06575558E+05	-8.25360434E-03	-1.91596698E+00	-1.11631192E-02
5.75000000E+02	2.51105802E+07	1.58541884E+05	-6.40500500E-03	-2.16442136E+00	-8.63798928E-03
5.77000000E+02	2.54235870E+07	1.54459611E+05	-6.24198716E-03	-2.18147724E+00	-8.41747465E-03
6.00000000E+02	2.84193773E+07	1.05456156E+05	-4.23761557E-03	-2.34461308E+00	-5.72291354E-03
6.25000000E+02	3.03554523E+07	4.90233410E+04	-1.85817666E-03	-2.44840458E+00	-2.54864626E-03
6.50000000E+02	3.08581043E+07	-8.89986513E+03	6.19848583E-04	-2.47104776E+00	7.45198796E-04
6.75000000E+02	2.99140988E+07	-6.63867596E+04	3.08000397E-03	-2.41134506E+00	4.01502876E-03
7.00000000E+02	2.75583687E+07	-1.21524686E+05	5.40671060E-03	-2.27168583E+00	7.11832589E-03
7.25000000E+02	2.38726162E+07	-1.72498456E+05	7.48910897E-03	-2.05795651E+00	9.91866468E-03
7.50000000E+02	1.89818674E+07	-2.17670209E+05	9.22470523E-03	-1.77932792E+00	1.22904828E-02
7.75000000E+02	1.30490869E+07	-2.55660446E+05	1.04867058E-02	-1.45027573E+00	1.37644038E-02
8.00000000E+02	6.26629807E+06	-2.85559953E+05	1.11738905E-02	-1.09297928E+00	1.44561888E-02
8.25000000E+02	-1.15780947E+06	-3.06928284E+05	1.13426417E-02	-7.25183267E-01	1.48705530E-02
8.50000000E+02	-9.00776794E+06	-3.19630838E+05	1.10298995E-02	-3.57793314E-01	1.45423263E-02
8.75000000E+02	-1.70686420E+07	-3.23869892E+05	1.02778456E-02	-7.47151906E-03	1.35492587E-02
9.00000000E+02	-2.51169139E+07	-3.17842114E+05	9.13911177E-03	3.13320999E-01	1.21095988E-02
9.25000000E+02	-3.28619509E+07	-2.99933498E+05	7.69277276E-03	5.92792029E-01	1.01115913E-02
9.50000000E+02	-4.00308483E+07	-2.72076538E+05	6.03347759E-03	8.22863043E-01	8.22764322E-03
9.75000000E+02	-4.63988409E+07	-2.36199616E+05	4.06576584E-03	1.00106164E+00	5.97060146E-03
9.91000000E+02	-4.99714730E+07	-2.10033733E+05	2.66300066E-03	1.08384191E+00	4.35682109E-03
1.00000000E+03	-5.17922723E+07	-1.94506394E+05	1.83019776E-03	1.11876751E+00	3.39879771E-03
1.02500000E+03	-5.60965469E+07	-1.49507802E+05	-6.22512161E-04	1.16890234E+00	5.45517543E-04
1.05000000E+03	-5.92630582E+07	-1.03957659E+05	-3.15649411E-03	1.14669244E+00	-2.34432490E-03

t=260, 521

1.07500000E+03	-6.13135991E+07	-6.07115675E+04	-5.76365214E-03	1.05080685E+00	-5.31058074E-03
1.10000000E+03	-4.17642932E+07	1.70062425E+06	-8.10368242E-03	7.32142682E-01	-2.05169981E-02
1.12500000E+03	1.50690597E+07	2.60124037E+06	-8.66616683E-03	2.91935357E-02	-3.84152336E-02
1.13300000E+03	3.56447108E+07	2.50124498E+06	-8.31827125E-03	-3.09610252E-01	-4.65052175E-02
1.16000000E+03	8.11313069E+07	6.17988305E+05	-4.53934787E-03	-1.23133563E+00	-1.55355811E-02
1.19000000E+03	6.23366763E+07	-1.45875704E+06	1.91070573E-03	-6.01864233E-01	8.20621915E-02
1.20600000E+03	3.85799572E+07	-1.32883917E+06	3.38744508E-03	1.66100285E+00	2.43944862E-01
1.21200000E+03	3.09123182E+07	-1.21454397E+06	3.53567822E-03	3.07708534E+00	5.96476616E-03
1.22500000E+03	1.70933086E+07	-9.10235419E+05	3.74084547E-03	3.15215051E+00	5.56131630E-03
1.24200000E+03	5.07531837E+06	-5.01753863E+05	3.85990903E-03	3.24098589E+00	4.86341675E-03
1.25000000E+03	1.84369738E+06	-3.05776609E+05	3.87766298E-03	3.27841090E+00	4.48921619E-03
1.26418000E+03	7.14598847E-24	4.67775900E+04	3.88243918E-03	3.33713802E+00	3.78888400E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -7.72844916E-02				
1.26418000E+03	7.14598847E-24	1.58521552E-03	3.88243918E-03	3.33713802E+00	-2.00531996+319

\$ASQ01

SUSTAINER BURN 310 SECONDS

N=5,WDSQ=0.,DWUS=10.,

H=0.,CODEI=1,CODEII=1,

OUTST=351.2,375.,385.,400.,425.,450.,

475.,500.,525.,550.,575.,577.,

600.,625.,650.,675.,700.,725.,

750.,775.,800.,825.,850.,875.,900.,

925.,950.,975.,991.,1000.,1025.,

1050.,1075.,1100.,1125.,1133.,1160.,1190.,

1206.,1212.,1225.,1242.,1250.,

1264.18,

SPRNG=1264.18,0.,0.,1.37E4,6.26,

RHOAC=351.2,5033.,1133.,

783.7,

\$END

t260,5

CODE 1 FREE

IR

0.

0.

0.

1.00000000E+00

t=310
Mode 1

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.41864430E+01	1.95244174E+03	1.23712539E+02	1.23712539E+02	1.89644434E+01	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-6.70517382E-03	4.66500834E-01	-6.70517382E-03
3.75000000E+02	2.26095819E+06	1.18797905E+04	-6.39468001E-03	3.07508282E-01	-6.51649999E-03
3.85000000E+02	2.37976332E+06	1.18811823E+04	-6.25980712E-03	2.43036428E-01	-6.37781816E-03
4.00000000E+02	2.55843216E+06	1.19368635E+04	-6.07073273E-03	1.48851436E-01	-6.18396681E-03
4.25000000E+02	2.85743459E+06	1.19714349E+04	-5.75377328E-03	-1.71345259E-03	-5.89241178E-03
4.50000000E+02	3.15042387E+06	1.19364188E+04	-5.38586599E-03	-1.44631412E-01	-5.55445948E-03
4.75000000E+02	3.45370789E+06	1.18357391E+04	-5.01047476E-03	-2.78329476E-01	-5.15704739E-03
5.00000000E+02	3.74770106E+06	1.16738564E+04	-4.71058679E-03	-4.03099756E-01	-4.83887093E-03
5.25000000E+02	4.03692258E+06	1.14545762E+04	-4.46903060E-03	-5.20639604E-01	-4.55132998E-03
5.50000000E+02	4.31997760E+06	1.11809505E+04	-4.19785204E-03	-6.32708817E-01	-4.35533021E-03
5.75000000E+02	4.59554025E+06	1.08558115E+04	-3.83830071E-03	-7.37088191E-01	-3.99119946E-03
5.77000000E+02	4.61722381E+06	1.08276982E+04	-3.80858209E-03	-7.45040499E-01	-3.96108488E-03
6.00000000E+02	4.86237398E+06	1.04833790E+04	-3.45687062E-03	-8.32080888E-01	-3.60452384E-03
6.25000000E+02	5.11935321E+06	1.00682364E+04	-3.05431186E-03	-9.17133273E-01	-3.19611800E-03
6.50000000E+02	5.36547015E+06	9.61522428E+03	-2.63146060E-03	-9.91713217E-01	-2.76688629E-03
6.75000000E+02	5.59984117E+06	9.12943032E+03	-2.18922931E-03	-1.05531222E+00	-2.31781284E-03
7.00000000E+02	5.82171278E+06	8.61617722E+03	-1.72859654E-03	-1.10744727E+00	-1.84995115E-03
7.25000000E+02	6.03046736E+06	8.08101039E+03	-1.25059612E-03	-1.14766246E+00	-1.36441317E-03
7.50000000E+02	6.22562859E+06	7.52968474E+03	-7.56306058E-04	-1.17553028E+00	-8.62357956E-04
7.75000000E+02	6.40686648E+06	6.96815258E+03	-2.63307333E-04	-1.19064788E+00	-3.52642622E-04
8.00000000E+02	6.57400108E+06	6.40238194E+03	1.93562521E-04	-1.19358152E+00	1.19971924E-04
8.25000000E+02	6.72099097E+06	5.83795739E+03	6.25489473E-04	-1.18512264E+00	5.58386515E-04
8.50000000E+02	6.80595409E+06	5.28014555E+03	1.04768865E-03	-1.16573308E+00	9.89665075E-04
8.75000000E+02	6.99110201E+06	4.73405957E+03	1.44952937E-03	-1.13574754E+00	1.40171059E-03
9.00000000E+02	7.09996778E+06	3.92319584E+03	1.83100817E-03	-1.09571714E+00	1.79434279E-03
9.25000000E+02	7.18737849E+06	3.07619815E+03	2.18855051E-03	-1.04611364E+00	2.16374246E-03
9.50000000E+02	7.25413371E+06	2.27189493E+03	2.51684287E-03	-9.87840892E-01	2.49852114E-03
9.75000000E+02	7.30138465E+06	1.51696198E+03	2.84772161E-03	-9.21169364E-01	2.83548805E-03
9.91000000E+02	7.32199088E+06	1.06278725E+03	3.06044287E-03	-8.74071027E-01	3.05187201E-03
1.00000000E+03	7.33044869E+06	8.18055715E+02	3.18032947E-03	-8.46055863E-01	3.17373225E-03
1.02500000E+03	7.34281000E+06	1.81857880E+02	3.51340444E-03	-7.62479376E-01	3.51198368E-03
1.05000000E+03	7.34011963E+06	-3.84984529E+02	3.83545032E-03	-6.70597424E-01	3.83845801E-03

TRIM SYSTEMS

1.07500000E+03	7.32419275E+06	-8.75993706E+02	4.15213493E-03	-5.70605862E-01	4.15867219E-03
1.10000000E+03	7.20605978E+06	-1.34778377E+04	4.45889745E-03	-4.62133426E-01	4.54223559E-03
1.12500000E+03	6.64079446E+06	-3.11151017E+04	4.72745932E-03	-3.44358740E-01	4.87337894E-03
1.13300000E+03	6.37203288E+06	-3.59770110E+04	4.81620757E-03	-3.04971670E-01	4.97282160E-03
1.16000000E+03	5.21070107E+06	-4.76746380E+04	5.15526272E-03	-1.66041562E-01	5.32233798E-03
1.19000000E+03	3.70846844E+06	-5.10893519E+04	5.52872125E-03	-9.79580927E-04	5.67588492E-03
1.20600000E+03	2.89370424E+06	-5.06314101E+04	5.62261519E-03	9.07232412E-02	5.75581145E-03
1.21200000E+03	2.59019503E+06	-5.05330809E+04	5.63430996E-03	1.25281618E-01	5.76306036E-03
1.22500000E+03	1.93519178E+06	-5.02119944E+04	5.65391695E-03	2.00275666E-01	5.77367639E-03
1.24200000E+03	1.08669701E+06	-4.95686907E+04	5.67103066E-03	2.98495136E-01	5.78014058E-03
1.25000000E+03	6.91671767E+05	-4.91782633E+04	5.67577159E-03	3.44737890E-01	5.78023202E-03
1.26418000E+03	8.83210248E-30	-4.83483130E+04	5.67903162E-03	4.26676700E-01	5.77572824E-03
1.26418000E+03	TOTAL DEFLECTION OF THE SPRING MASS SYSTEM =				3.95575064E+00
1.26418000E+03	8.83210248E-30	-1.92782157E-09	5.67903162E-03	4.26676700E-01	2.43872143+313

t310,1

t=310

Mode 2

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.51781723E+01	4.24819415E+03	1.23712539E+02	1.23712539E+02	5.24272121E+01	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-1.94574335E-02	3.10258687E-01	-1.94574335E-02
3.75000000E+02	1.28951572E+07	1.71825143E+04	-1.75987159E-02	-1.35244187E-01	-1.77749121E-02
3.85000000E+02	1.30669716E+07	1.71800617E+04	-1.68440679E-02	-3.09170747E-01	-1.70147106E-02
4.00000000E+02	1.33228483E+07	1.69113130E+04	-1.58327405E-02	-5.56512754E-01	-1.59931627E-02
4.25000000E+02	1.37367786E+07	1.61378721E+04	-1.42475603E-02	-9.36040151E-01	-1.44344494E-02
4.50000000E+02	1.41266487E+07	1.49933175E+04	-1.25431267E-02	-1.27580569E+00	-1.27548967E-02
4.75000000E+02	1.44837053E+07	1.35201853E+04	-1.09151693E-02	-1.57272441E+00	-1.10826019E-02
5.00000000E+02	1.48002719E+07	1.17603747E+04	-9.69353170E-03	-1.83324056E+00	-9.82276658E-03
5.25000000E+02	1.50696100E+07	9.74663926E+03	-8.76515390E-03	-2.06612355E+00	-8.83518200E-03
5.50000000E+02	1.52856967E+07	7.50390056E+03	-7.78386954E-03	-2.27723670E+00	-7.88955828E-03
5.75000000E+02	1.54431102E+07	5.05799283E+03	-6.54439372E-03	-2.45858354E+00	-6.61563306E-03
5.77000000E+02	1.54530229E+07	4.85451162E+03	-6.44472856E-03	-2.47171229E+00	-6.51310196E-03
6.00000000E+02	1.55371744E+07	2.44146474E+03	-5.29474901E-03	-2.60791349E+00	-5.32913584E-03
6.25000000E+02	1.55640380E+07	-3.12511401E+02	-4.04020508E-03	-2.72498330E+00	-4.03580351E-03
6.50000000E+02	1.55206813E+07	-3.17058759E+03	-2.78630871E-03	-2.80969678E+00	-2.74165255E-03
6.75000000E+02	1.54049192E+07	-6.09939514E+03	-1.53881653E-03	-2.86211095E+00	-1.45290956E-03
7.00000000E+02	1.52153991E+07	-9.06570518E+03	-3.03627821E-04	-2.88244037E+00	-1.75941833E-04
7.25000000E+02	1.49515959E+07	-1.20365927E+04	9.13282494E-04	-2.87105982E+00	1.08281197E-03
7.50000000E+02	1.46138020E+07	-1.49796026E+04	2.10593017E-03	-2.82850525E+00	2.31691049E-03
7.75000000E+02	1.42031134E+07	-1.78629500E+04	3.23157494E-03	-2.75575648E+00	3.46058712E-03
8.00000000E+02	1.37213979E+07	-2.06571892E+04	4.21499617E-03	-2.65638512E+00	4.45243513E-03
8.25000000E+02	1.31712111E+07	-2.33366502E+04	5.08849535E-03	-2.53369305E+00	5.35673271E-03
8.50000000E+02	1.25557148E+07	-2.58782663E+04	5.88791793E-03	-2.38955381E+00	6.17229448E-03
8.75000000E+02	1.18786225E+07	-2.82610512E+04	6.59706144E-03	-2.22629287E+00	6.88252660E-03
9.00000000E+02	1.11323431E+07	-3.16329458E+04	7.22070852E-03	-2.04617718E+00	7.51634353E-03
9.25000000E+02	1.02989092E+07	-3.49858581E+04	7.75804461E-03	-1.85124351E+00	8.04018863E-03
9.50000000E+02	9.38593131E+06	-3.79930388E+04	8.20571215E-03	-1.64424736E+00	8.51210762E-03
9.75000000E+02	8.40230594E+06	-4.06344410E+04	8.61024043E-03	-1.42602233E+00	8.93793753E-03
9.91000000E+02	7.74002208E+06	-4.21244420E+04	8.84509572E-03	-1.28101295E+00	9.18480896E-03
1.00000000E+03	7.35741047E+06	-4.28917692E+04	8.96862959E-03	-1.19776092E+00	9.31453095E-03
1.02500000E+03	6.26105356E+06	-4.47488434E+04	9.27791516E-03	-9.60740142E-01	9.62751550E-03
1.05000000E+03	5.12341789E+06	-4.61920550E+04	9.52770651E-03	-7.16678127E-01	9.88858194E-03

t310, 2

325

7.10000000E+03

1.07500000E+03	3.95499186E+06	-4.72104750E+04	9.72398078E-03	-4.67029312E-01	1.00762978E-02
1.10000000E+03	2.64423998E+06	-6.32116044E+04	9.86456158E-03	-2.12795879E-01	1.02554209E-02
1.12500000E+03	9.15235341E+05	-7.10761768E+04	9.93313192E-03	4.40506106E-02	1.02664559E-02
1.13300000E+03	3.55931833E+05	-6.83043926E+04	9.94174114E-03	1.26082009E-01	1.02390817E-02
1.16000000E+03	-1.17264079E+06	-4.20677266E+04	9.91099457E-03	4.00333375E-01	1.00584205E-02
1.19000000E+03	-1.78782239E+06	-7.65285583E+02	9.77615590E-03	6.97882360E-01	9.77836032E-03
1.20600000E+03	-1.63907214E+06	1.81767777E+04	9.72790457E-03	8.53394131E-01	9.68008684E-03
1.21200000E+03	-1.52482467E+06	1.99248806E+04	9.72115801E-03	9.11444680E-01	9.67039252E-03
1.22500000E+03	-1.23920391E+06	2.41066180E+04	9.70914129E-03	1.03703572E+00	9.65164517E-03
1.24200000E+03	-7.77306945E+05	3.03875203E+04	9.69761355E-03	1.20092930E+00	9.63072496E-03
1.25000000E+03	-5.21247136E+05	3.36613354E+04	9.69413910E-03	1.27794192E+00	9.62263845E-03
1.26418000E+03	6.30718391E-21	3.99637077E+04	9.69160493E-03	1.41430775E+00	9.61167752E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -1.50275120E+00				
1.26418000E+03	6.30718391E-21	6.18819502E-08	9.69160493E-03	1.41430775E+00	-7.82815385+314

t310,2

TRW SYSTEMS

t=310
Mode 3

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.26822665E+02	1.60839885E+04	1.23712539E+02	1.23712539E+02	7.67742654E+01	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	1.75054733E-02	6.34321818E-01	1.75054733E-02
3.75000000E+02	-3.92808733E+07	1.33125332E+05	1.15212233E-02	9.45251320E-01	1.01561046E-02
3.85000000E+02	-3.79494164E+07	1.33166679E+05	9.27592861E-03	1.03564781E+00	7.95323722E-03
4.00000000E+02	-3.59330781E+07	1.35716453E+05	6.44103919E-03	1.13308386E+00	5.15362157E-03
4.25000000E+02	-3.24831678E+07	1.40326440E+05	2.42706469E-03	1.21013113E+00	8.01975629E-04
4.50000000E+02	-2.89159854E+07	1.45029734E+05	-1.32755173E-03	1.18069338E+00	-3.37599430E-03
4.75000000E+02	-2.52343049E+07	1.49423877E+05	-4.42283323E-03	1.05712877E+00	-6.27328372E-03
5.00000000E+02	-2.14498524E+07	1.53214417E+05	-6.38016488E-03	8.76268343E-01	-8.06383979E-03
5.25000000E+02	-1.75801000E+07	1.56225533E+05	-7.60015391E-03	6.61235082E-01	-8.72261038E-03
5.50000000E+02	-1.36458958E+07	1.58350354E+05	-8.58955457E-03	4.15718959E-01	-1.08198412E-02
5.75000000E+02	-9.67134766E+06	1.59429067E+05	-9.52994747E-03	1.32577795E-01	-1.17754273E-02
5.77000000E+02	-9.35245055E+06	1.59466813E+05	-9.59131460E-03	1.08964681E-01	-1.18373260E-02
6.00000000E+02	-5.68401213E+06	1.59380536E+05	-1.01491038E-02	-1.70239993E-01	-1.23936184E-02
6.25000000E+02	-1.71339365E+06	1.58084394E+05	-1.04471720E-02	-4.84284831E-01	-1.26737128E-02
6.50000000E+02	2.20990876E+06	1.55573270E+05	-1.04267294E-02	-8.01125586E-01	-1.26179022E-02
6.75000000E+02	6.05501424E+06	1.51832572E+05	-1.00928379E-02	-1.11242272E+00	-1.22313248E-02
7.00000000E+02	9.79159401E+06	1.46899987E+05	-9.45303283E-03	-1.41000185E+00	-1.15220467E-02
7.25000000E+02	1.33906490E+07	1.40844695E+05	-8.51724735E-03	-1.68592601E+00	-1.05009754E-02
7.50000000E+02	1.68252947E+07	1.33766303E+05	-7.29767295E-03	-1.93256492E+00	-9.18170539E-03
7.75000000E+02	2.00715045E+07	1.25794073E+05	-5.85921314E-03	-2.14171219E+00	-7.47195767E-03
8.00000000E+02	2.31088974E+07	1.17089019E+05	-4.33952509E-03	-2.30771471E+00	-5.68537587E-03
8.25000000E+02	2.59212905E+07	1.07823420E+05	-2.74638206E-03	-2.42899540E+00	-3.98573172E-03
8.50000000E+02	2.84968413E+07	9.81710657E+04	-1.05553190E-03	-2.50520551E+00	-2.13433482E-03
8.75000000E+02	3.08281229E+07	8.83127837E+04	6.64930108E-04	-2.53410712E+00	-2.27118211E-04
9.00000000E+02	3.28595845E+07	7.31686197E+04	2.38970686E-03	-2.51534375E+00	1.70588798E-03
9.25000000E+02	3.44855733E+07	5.69830313E+04	4.07530650E-03	-2.44850681E+00	3.61576592E-03
9.50000000E+02	3.57136227E+07	4.13822373E+04	5.67222052E-03	-2.33668261E+00	5.33849280E-03
9.75000000E+02	3.65619289E+07	2.66509172E+04	7.31624212E-03	-2.18124830E+00	7.10131537E-03
9.91000000E+02	3.69169455E+07	1.78113868E+04	8.38536864E-03	-2.05851222E+00	8.24172843E-03
1.00000000E+03	3.70558021E+07	1.30757420E+04	8.99065832E-03	-1.98144161E+00	8.88520879E-03
1.02500000E+03	3.72277681E+07	9.46830075E+02	1.06776953E-02	-1.73696145E+00	1.06702982E-02
1.05000000E+03	3.71176067E+07	-9.44699992E+03	1.23090265E-02	-1.44875666E+00	1.23828312E-02

t310,3 327

TRW SYSTEMS

1.07500000E+03	3.67722107E+07	-1.78260605E+04	1.39052881E-02	-1.11830477E+00	1.40383184E-02
1.10000000E+03	3.49195523E+07	-1.97741542E+05	1.54304681E-02	-7.38805587E-01	1.66531727E-02
1.12500000E+03	2.73340360E+07	-3.84717589E+05	1.66441675E-02	-2.97481789E-01	1.84483668E-02
1.13300000E+03	2.41339324E+07	-4.12246360E+05	1.69951343E-02	-1.48458028E-01	1.87897126E-02
1.16000000E+03	1.29791804E+07	-3.78895764E+05	1.80553105E-02	3.68675186E-01	1.93831466E-02
1.19000000E+03	4.31825697E+06	-1.95756508E+05	1.87269096E-02	9.49491239E-01	1.92907893E-02
1.20600000E+03	2.03932875E+06	-9.41412035E+04	1.88200741E-02	1.25647846E+00	1.90677318E-02
1.21200000E+03	1.50361126E+06	-8.42883720E+04	1.88276339E-02	1.37081081E+00	1.90423875E-02
1.22500000E+03	5.61369607E+05	-6.00024946E+04	1.88363541E-02	1.61796217E+00	1.89794646E-02
1.24200000E+03	-1.47012304E+05	-2.21965310E+04	1.88380951E-02	1.93983889E+00	1.88869538E-02
1.25000000E+03	-2.44974331E+05	-2.04244990E+03	1.88369782E-02	2.09075238E+00	1.88413166E-02
1.26418000E+03	6.40501355E-29	3.73821329E+04	1.88353799E-02	2.35734760E+00	1.87606156E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -3.71275243E-01				
1.26418000E+03	6.40501355E-29	-4.34366435E-09	1.88353799E-02	2.35734760E+00	5.49479657+313

t310,3

TRW SYSTEMS

t=310

Mode 4

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.50339257E+02	6.26697437E+04	1.23712539E+02	1.23712539E+02	1.15111023E+02	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	7.60095508E-03	5.98097115E-01	7.60095508E-03
3.75000000E+02	+5.96243005E+07	4.88980609E+05	-1.98182775E-03	5.37880683E-01	-6.99602449E-03
3.85000000E+02	-5.47340789E+07	4.89061371E+05	-5.30720344E-03	4.51717335E-01	-1.01648545E-02
4.00000000E+02	-4.73710564E+07	4.92397548E+05	-9.23058790E-03	2.69575632E-01	-1.39015122E-02
4.25000000E+02	-3.50338893E+07	4.93536993E+05	-1.40740813E-02	-1.40169184E-01	-1.97896226E-02
4.50000000E+02	-2.27549294E+07	4.87406081E+05	-1.76017508E-02	-6.85383017E-01	-2.44860175E-02
4.75000000E+02	-1.07396443E+07	4.72222840E+05	-1.95427051E-02	-1.31285768E+00	-2.53906659E-02
5.00000000E+02	7.75953529E+05	4.47427168E+05	-1.99800967E-02	-1.94273339E+00	-2.48968787E-02
5.25000000E+02	1.15530944E+07	4.13208463E+05	-1.96098923E-02	-2.54747617E+00	-2.25787317E-02
5.50000000E+02	2.13622835E+07	3.70020384E+05	-1.84941108E-02	-3.13701794E+00	-2.37056655E-02
5.75000000E+02	2.99793685E+07	3.17927091E+05	-1.64151279E-02	-3.69619912E+00	-2.08929742E-02
5.77000000E+02	3.06107050E+07	3.13400980E+05	-1.62196712E-02	-3.73772666E+00	-2.06337695E-02
6.00000000E+02	3.71925033E+07	2.57907379E+05	-1.36964972E-02	-4.17540024E+00	-1.73289955E-02
6.25000000E+02	4.28198824E+07	1.91312989E+05	-1.04589987E-02	-4.55754862E+00	-1.31535478E-02
6.50000000E+02	4.67165136E+07	1.19727815E+05	-6.83662852E-03	-4.82928103E+00	-8.52293578E-03
6.75000000E+02	4.87792914E+07	4.49085562E+04	-2.97341599E-03	-4.98130651E+00	-3.60593086E-03
7.00000000E+02	4.89505239E+07	-3.12793649E+04	9.80107660E-04	-5.00866338E+00	1.42066210E-03
7.25000000E+02	4.72198169E+07	-1.06928930E+05	4.87065875E-03	-4.91086177E+00	6.37670001E-03
7.50000000E+02	4.36242590E+07	-1.80159922E+05	8.54603450E-03	-4.69190713E+00	1.10834982E-02
7.75000000E+02	3.82468896E+07	-2.49191740E+05	1.17579962E-02	-4.36268177E+00	1.49527621E-02
8.00000000E+02	3.12121271E+07	-3.12534390E+05	1.42150331E-02	-3.94806797E+00	1.78073824E-02
8.25000000E+02	2.26768643E+07	-3.69076955E+05	1.59723267E-02	-3.47146446E+00	2.02145906E-02
8.50000000E+02	1.28220468E+07	-4.17980900E+05	1.70827742E-02	-2.94805534E+00	2.16759709E-02
8.75000000E+02	1.84616454E+06	-4.58703378E+05	1.75179253E-02	-2.40099334E+00	2.21512927E-02
9.00000000E+02	-1.02170240E+07	-5.07832771E+05	1.73029193E-02	-1.84850155E+00	2.20490200E-02
9.25000000E+02	-2.34409985E+07	-5.47793846E+05	1.64758059E-02	-1.30791646E+00	2.08934982E-02
9.50000000E+02	-3.74960003E+07	-5.74451786E+05	1.50933975E-02	-7.98623200E-01	1.97260732E-02
9.75000000E+02	-5.20595307E+07	-5.88639127E+05	1.30593862E-02	-3.27886027E-01	1.78064759E-02
9.91000000E+02	-6.15082742E+07	-5.91716856E+05	1.14076101E-02	-5.55839909E-02	1.61795202E-02
1.00000000E+03	-6.68340463E+07	-5.91573625E+05	1.03575349E-02	8.53742859E-02	1.51282899E-02
1.02500000E+03	-8.15584534E+07	-5.84953332E+05	6.98953240E-03	4.22142822E-01	1.15594803E-02
1.05000000E+03	-9.60203864E+07	-5.70984003E+05	3.09397961E-03	6.62492232E-01	7.55479213E-03

t=310, 329

TRW SYSTEMS

1.07500000E+03	-1.10068001E+08	-5.52278128E+05	-1.35576125E-03	7.91957471E-01	2.76571731E-03
1.10000000E+03	-1.18978865E+08	9.75425976E+04	-6.23175518E-03	7.63071268E-01	-6.83489490E-03
1.12500000E+03	-1.04674768E+08	9.90964404E+05	-1.06160738E-02	4.78601216E-01	-1.52633717E-02
1.13300000E+03	-9.59079485E+07	1.19034083E+06	-1.19849188E-02	3.48607013E-01	-1.71666743E-02
1.16000000E+03	-5.90174826E+07	1.37291244E+06	-1.64716600E-02	-1.79424838E-01	-2.12830170E-02
1.19000000E+03	-2.50693109E+07	8.41495371E+05	-1.98290654E-02	-8.37142325E-01	-2.22530060E-02
1.20600000E+03	-1.46178035E+07	4.78710772E+05	-2.04042013E-02	-1.18963689E+00	-2.16635478E-02
1.21200000E+03	-1.18536332E+07	4.42047293E+05	-2.04606722E-02	-1.31940080E+00	-2.15869398E-02
1.22500000E+03	-6.68846369E+06	3.49646785E+05	-2.05401538E-02	-1.59870138E+00	-2.13740880E-02
1.24200000E+03	-1.95458682E+06	2.02304375E+05	-2.05867653E-02	-1.95923838E+00	-2.10320749E-02
1.25000000E+03	-6.50247680E+05	1.22692431E+05	-2.05934285E-02	-2.12678810E+00	-2.08540417E-02
1.26418000E+03	-3.86511201E-27	-3.43562613E+04	-2.05947476E-02	-2.42018261E+00	-2.05260351E-02
1.26418000E+03	TOTAL DEFLECTION OF THE SPRING MASS SYSTEM = 8.75736891E-02				
1.26418000E+03	-3.86511201E-27	1.34697268E-08	-2.05947476E-02	-2.42018261E+00	-1.70393940+314

E310,4

t=310

Mode 5

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.65267800E+02	2.16474126E+05	1.23712539E+02	1.23712539E+02	1.21815700E+02	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	3.66796827E-03	4.80713429E-01	3.66796827E-03
3.75000000E+02	-8.34348373E+07	1.35721575E+06	-1.09161066E-02	4.12634045E-02	-2.48335231E-02
3.85000000E+02	-6.98628066E+07	1.35716527E+06	-1.53753715E-02	-2.27991935E-01	-2.88555516E-02
4.00000000E+02	-4.95947898E+07	1.34279140E+06	-1.99780439E-02	-6.92915023E-01	-3.27158754E-02
4.25000000E+02	-1.66648069E+07	1.28406416E+06	-2.38857319E-02	-1.55501531E+00	-3.87561912E-02
4.50000000E+02	1.42038033E+07	1.17696715E+06	-2.39974473E-02	-2.52893388E+00	-4.06212771E-02
4.75000000E+02	4.17520751E+07	1.01873690E+06	-2.08610946E-02	-3.45906218E+00	-3.34770314E-02
5.00000000E+02	6.47748289E+07	8.16652945E+05	-1.64324123E-02	-4.19375809E+00	-2.54066204E-02
5.25000000E+02	8.23076622E+07	5.81323945E+05	-1.18579895E-02	-4.72417546E+00	-1.60347128E-02
5.50000000E+02	9.36525137E+07	3.23044510E+05	-6.08721582E-03	-5.08346283E+00	-1.06371385E-02
5.75000000E+02	9.83451912E+07	5.13016077E+04	1.70032200E-03	-5.20518185E+00	9.77764146E-04
5.77000000E+02	9.84259043E+07	2.94135089E+04	2.33509101E-03	-5.20228333E+00	1.92081623E-03
6.00000000E+02	9.62283481E+07	-2.19146770E+05	9.59150714E-03	-5.03386304E+00	1.26780814E-02
6.25000000E+02	8.75263544E+07	-4.73004920E+05	1.70436589E-02	-4.57689658E+00	2.37057000E-02
6.50000000E+02	7.28370076E+07	-6.95856350E+05	2.35473972E-02	-3.86014576E+00	3.33481909E-02
6.75000000E+02	5.30977220E+07	-8.75095543E+05	2.86555501E-02	-2.92627124E+00	4.09808394E-02
7.00000000E+02	2.95297483E+07	-1.00074505E+06	3.20084304E-02	-1.83206482E+00	4.61034311E-02
7.25000000E+02	3.56390972E+06	-1.06610977E+06	3.33538414E-02	-6.44953845E-01	4.83694720E-02
7.50000000E+02	-2.32475725E+07	-1.06823020E+06	3.25604987E-02	5.61110593E-01	4.76059946E-02
7.75000000E+02	-4.93279427E+07	-1.00817351E+06	2.97420776E-02	1.70150922E+00	4.26673790E-02
8.00000000E+02	-7.31874569E+07	-8.91851400E+05	2.54233680E-02	2.69495160E+00	3.56745335E-02
8.25000000E+02	-9.35264896E+07	-7.28218393E+05	1.99884211E-02	3.49913460E+00	2.83587475E-02
8.50000000E+02	-1.09289610E+08	-5.27605596E+05	1.36664384E-02	4.09575680E+00	1.94643021E-02
8.75000000E+02	-1.19694824E+08	-3.01611919E+05	7.00382889E-03	4.46190408E+00	1.00504139E-02
9.00000000E+02	-1.22986120E+08	6.52595372E+04	3.93325185E-04	4.58576278E+00	-2.16577033E-04
9.25000000E+02	-1.16356661E+08	4.63228271E+05	-5.64336658E-03	4.45954125E+00	-9.37907844E-03
9.50000000E+02	-9.99957608E+07	8.40723956E+05	-1.05962400E-02	4.12305301E+00	-1.73762719E-02
9.75000000E+02	-7.46365418E+07	1.18038389E+06	-1.45973419E-02	3.60122030E+00	-2.41165668E-02
9.91000000E+02	-5.41946058E+07	1.37098498E+06	-1.64786435E-02	3.18696506E+00	-2.75349740E-02
1.00000000E+03	-4.14152393E+07	1.46753432E+06	-1.72620903E-02	2.93191558E+00	-2.90970444E-02
1.02500000E+03	-1.78904795E+06	1.69134087E+06	-1.82650404E-02	2.16492874E+00	-3.14786409E-02
1.05000000E+03	4.25760051E+07	1.84622018E+06	-1.73847423E-02	1.36864822E+00	-3.18083375E-02

t=310,5 334

1.07500000E+03	8.99448786E+07	1.93214251E+06	-1.45373999E-02	6.05535085E-01	-2.89563739E-02
1.10000000E+03	1.42245279E+08	2.27127655E+06	-9.70673766E-03	-7.14546309E-02	-2.37508284E-02
1.12500000E+03	1.84650152E+08	7.71056383E+05	-3.25187765E-03	-4.71070109E-01	-6.86787912E-03
1.13300000E+03	1.87596760E+08	-4.23397050E+04	-7.06453878E-04	-5.00507033E-01	-5.22141961E-04
1.16000000E+03	1.49956821E+08	-2.28963716E+06	9.39680852E-03	-2.45567226E-01	1.74208175E-02
1.19000000E+03	7.66162699E+07	-2.19671592E+06	1.87597992E-02	4.18405679E-01	2.50874738E-02
1.20600000E+03	4.74318098E+07	-1.44174459E+06	2.05555686E-02	8.18803994E-01	2.43483723E-02
1.21200000E+03	3.90440358E+07	-1.35172977E+06	2.07400613E-02	9.64446317E-01	2.41840579E-02
1.22500000E+03	2.29909364E+07	-1.10663818E+06	2.10065783E-02	1.27555894E+00	2.36459947E-02
1.24200000E+03	7.60185488E+06	-6.85053211E+05	2.11731678E-02	1.66969521E+00	2.26810976E-02
1.25000000E+03	3.05274553E+06	-4.48202229E+05	2.12007381E-02	1.84905517E+00	2.21527725E-02
1.26418000E+03	6.21307545E-27	2.98408209E+04	2.12098271E-02	2.15614144E+00	2.11501455E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -2.20206654E-02				
1.26418000E+03	6.21307545E-27	9.16362791E-10	2.12098271E-02	2.15614144E+00	-1.15921184+313

\$AS001

SUSTAINER BURN 361 SECONDS-B/O

N=5,WOSQ=0.,DWOS=10.,

H=0.,CODEI=1,CODEII=1,

OUTSI=351.2,375.,385.,400.,425.,450.,

475.,500.,525.,550.,575.,577.,

600.,625.,650.,675.,700.,725.,

750.,775.,800.,825.,850.,875.,900.,

925.,950.,975.,991.,1000.,1025.,

1050.,1075.,1100.,1125.,1133.,1160.,1190.,

1206.,1212.,1225.,1242.,1250.,1264.18,

SPRNG=1264.18,0.,0.,1.37E4,6.26,

RHOAC=351.2,5033.,1133.,

783.7,

\$END

t310,5

CODE 1 FREE

IR

0.

0.

0.

1.00000000E+00

t=361

End Sustainer

Phase

Mode 1

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
4.15081732E+00	1.72292844E+01	3.46629400E+04	3.46629400E+04	3.45943439E+04	0.	
STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.		-1.70075251E-02	8.12135447E-01	-1.70075251E-02
3.75000000E+02	1.72019141E+06	7.04414718E+04		-1.68779501E-02	3.90544307E-01	-1.76002843E-02
3.85000000E+02	2.42463473E+06	7.04466883E+04		-1.67576260E-02	2.15227952E-01	-1.74573448E-02
4.00000000E+02	3.48226722E+06	7.05289820E+04		-1.65324963E-02	-4.47606254E-02	-1.72015402E-02
4.25000000E+02	5.24171534E+06	7.01128880E+04		-1.60233590E-02	-4.68290503E-01	-1.68353206E-02
4.50000000E+02	6.98228224E+06	6.90215548E+04		-1.52748315E-02	-8.80777626E-01	-1.62497122E-02
4.75000000E+02	8.68734766E+06	6.72778560E+04		-1.43877364E-02	-1.27391072E+00	-1.52208987E-02
5.00000000E+02	1.03410522E+07	6.49192740E+04		-1.35969745E-02	-1.64264839E+00	-1.43103731E-02
5.25000000E+02	1.19284974E+07	6.19829044E+04		-1.29068871E-02	-1.98970707E+00	-1.33522248E-02
5.50000000E+02	1.34356600E+07	5.85007408E+04		-1.20803422E-02	-2.32073269E+00	-1.29042963E-02
5.75000000E+02	1.48491993E+07	5.44994986E+04		-1.09391513E-02	-2.62862288E+00	-1.17067498E-02
5.77000000E+02	1.49578576E+07	5.41583205E+04		-1.08429991E-02	-2.65193555E+00	-1.16057923E-02
6.00000000E+02	1.61566975E+07	5.00259165E+04		-9.68816174E-03	-2.90509947E+00	-1.03927521E-02
6.25000000E+02	1.73469996E+07	4.51330225E+04		-8.33638401E-03	-3.14737112E+00	-8.97206038E-03
6.50000000E+02	1.84103310E+07	3.98781499E+04		-6.89367313E-03	-3.35290200E+00	-7.45533721E-03
6.75000000E+02	1.93383997E+07	3.43225069E+04		-5.37061332E-03	-3.51943291E+00	-5.85402891E-03
7.00000000E+02	2.01244876E+07	2.85307157E+04		-3.77839461E-03	-3.64499926E+00	-4.18023567E-03
7.25000000E+02	2.07635298E+07	2.25703233E+04		-2.12868264E-03	-3.72794569E+00	-2.44657452E-03
7.50000000E+02	2.12521813E+07	1.65112933E+04		-4.33482576E-04	-3.76693728E+00	-6.66036003E-04
7.75000000E+02	2.15888709E+07	1.04254751E+04		1.23938795E-03	-3.76106171E+00	1.10572801E-03
8.00000000E+02	2.17738241E+07	4.38369125E+03		2.76634247E-03	-3.71312556E+00	2.71595522E-03
8.25000000E+02	2.18089657E+07	-1.54909503E+03		4.18217083E-03	-3.62667781E+00	4.19997652E-03
8.50000000E+02	2.16977806E+07	-7.31264809E+03		5.53410402E-03	-3.50389307E+00	5.61446279E-03
8.75000000E+02	2.14452202E+07	-1.28499473E+04		6.78595533E-03	-3.34702606E+00	6.91575278E-03
9.00000000E+02	2.10295054E+07	-2.08966272E+04		7.93686149E-03	-3.15870743E+00	8.13215707E-03
9.25000000E+02	2.04031588E+07	-2.91134726E+04		8.97505218E-03	-2.94128137E+00	9.20983825E-03
9.50000000E+02	1.95789967E+07	-3.67106978E+04		9.88445706E-03	-2.69881296E+00	1.01805111E-02
9.75000000E+02	1.85733323E+07	-4.36230202E+04		1.07522101E-02	-2.43264917E+00	1.11040087E-02
9.91000000E+02	1.78426605E+07	-4.76586382E+04		1.12820538E-02	-2.25045420E+00	1.16663977E-02
1.00000000E+03	1.74040718E+07	-4.97883335E+04		1.15704623E-02	-2.14407549E+00	1.19719811E-02
1.02500000E+03	1.60906284E+07	-5.51482641E+04		1.23311849E-02	-1.83458974E+00	1.27620307E-02
1.05000000E+03	1.46538161E+07	-5.96495067E+04		1.30058165E-02	-1.50652081E+00	1.34718283E-02

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1.07500000E+03	1.31157052E+07	-6.32447761E+04	1.36059590E-02	-1.16199814E+00	1.40779350E-02
1.10000000E+03	1.14994708E+07	-6.58929932E+04	1.41240957E-02	-8.03243312E-01	1.46050664E-02
1.12500000E+03	9.74181475E+06	-9.01117118E+04	1.45349980E-02	-4.29941673E-01	1.55655600E-02
1.13300000E+03	8.94177949E+06	-1.08815936E+05	1.46625038E-02	-3.02566060E-01	1.63238158E-02
1.16000000E+03	5.57694483E+06	-1.24882332E+05	1.50830338E-02	1.54488337E-01	1.73051394E-02
1.19000000E+03	2.46680281E+06	-7.83912177E+04	1.54054619E-02	6.90626132E-01	1.97126717E-02
1.20600000E+03	1.47925862E+06	-4.60538717E+04	1.54625608E-02	1.02627885E+00	2.37996121E-02
1.21200000E+03	1.21296140E+06	-4.26344716E+04	1.54683036E-02	1.16742138E+00	1.55535725E-02
1.22500000E+03	7.12645262E+05	-3.41108567E+04	1.54765678E-02	1.36956838E+00	1.55447896E-02
1.24200000E+03	2.41629549E+05	-2.09159895E+04	1.54817636E-02	1.63366379E+00	1.55235955E-02
1.25000000E+03	1.02007181E+05	-1.39040515E+04	1.54826550E-02	1.75780121E+00	1.55104631E-02
1.26418000E+03	-4.10023619E-29	-2.14982064E+02	1.54829842E-02	1.97755275E+00	1.54834142E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM =				1.99324487E+00
1.26418000E+03	-4.10023619E-29	-2.44421326E-09	1.54829842E-02	1.97755275E+00	3.09196420+313

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t=361

End Sustainer

Phase

Atlas SLV3A/Burner 2

Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DN	ACCELERATION
9.95747516E+00	9.91513115E+01	3.46629400E+04	3.46629400E+04	3.45413113E+04	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-1.93829162E-02	3.45856579E-01	-1.93829162E-02
3.75000000E+02	4.39665286E+06	1.72564481E+05	-1.90387790E-02	-1.56331939E-01	-2.08083221E-02
3.85000000E+02	6.12218591E+06	1.72538721E+05	-1.87334015E-02	-3.62678119E-01	-2.04471597E-02
4.00000000E+02	8.69085297E+06	1.69669670E+05	-1.81684358E-02	-6.64485605E-01	-1.97779365E-02
4.25000000E+02	1.28365578E+07	1.61247392E+05	-1.69100298E-02	-1.14202193E+00	-1.87773997E-02
4.50000000E+02	1.67173437E+07	1.48523942E+05	-1.50979578E-02	-1.58946938E+00	-1.71957536E-02
4.75000000E+02	2.02297431E+07	1.31852919E+05	-1.30017237E-02	-1.98662779E+00	-1.46345772E-02
5.00000000E+02	2.32816295E+07	1.11776114E+05	-1.11893439E-02	-2.32376435E+00	-1.24176528E-02
5.25000000E+02	2.57945045E+07	8.88117783E+04	-9.66482957E-03	-2.60917306E+00	-1.03029286E-02
5.50000000E+02	2.77018835E+07	6.33974579E+04	-7.92514969E-03	-2.85354969E+00	-8.81807163E-03
5.75000000E+02	2.89473576E+07	3.59502660E+04	-5.63629308E-03	-3.04081898E+00	-6.14263486E-03
5.77000000E+02	2.90169938E+07	3.36844935E+04	-5.44930887E-03	-3.05288545E+00	-5.92373835E-03
6.00000000E+02	2.94875101E+07	7.07740350E+03	-3.27519581E-03	-3.15991120E+00	-3.37487755E-03
6.25000000E+02	2.92946945E+07	-2.25792435E+04	-8.99961323E-04	-3.20935258E+00	-5.81943809E-04
6.50000000E+02	2.83574168E+07	-5.23719708E+04	1.42972772E-03	-3.18937192E+00	2.16736111E-03
6.75000000E+02	2.66802824E+07	-8.16632153E+04	3.65391259E-03	-3.10192297E+00	4.80409872E-03
7.00000000E+02	2.42835422E+07	-1.09841546E+05	5.71364124E-03	-2.95066888E+00	7.26070527E-03
7.25000000E+02	2.12022424E+07	-1.36337338E+05	7.55219834E-03	-2.74092948E+00	9.47244254E-03
7.50000000E+02	1.74849899E+07	-1.60637788E+05	9.11625125E-03	-2.47959349E+00	1.13787553E-02
7.75000000E+02	1.31923490E+07	-1.82303131E+05	1.03212073E-02	-2.17671257E+00	1.26584269E-02
8.00000000E+02	8.39438113E+06	-2.01023645E+05	1.10858110E-02	-1.84786169E+00	1.33964276E-02
8.25000000E+02	3.16721518E+06	-2.16618557E+05	1.14632974E-02	-1.50520816E+00	1.39531659E-02
8.50000000E+02	-2.40963730E+06	-2.28988681E+05	1.14893637E-02	-1.15595677E+00	1.40057229E-02
8.75000000E+02	-8.25521928E+06	-2.38124947E+05	1.11838139E-02	-8.11610803E-01	1.35891164E-02
9.00000000E+02	-1.43221186E+07	-2.47147001E+05	1.05766503E-02	-4.80721415E-01	1.28864354E-02
9.25000000E+02	-2.05734207E+07	-2.52156865E+05	9.70912376E-03	-1.71347517E-01	1.17426469E-02
9.50000000E+02	-2.68919688E+07	-2.52601625E+05	8.63040642E-03	1.09451147E-01	1.06675163E-02
9.75000000E+02	-3.31691226E+07	-2.48925085E+05	7.26503268E-03	3.59360910E-01	9.27249304E-03
9.91000000E+02	-3.71196040E+07	-2.44653583E+05	6.24248546E-03	4.99433014E-01	8.21549822E-03
1.00000000E+03	-3.93083449E+07	-2.41667277E+05	5.61712925E-03	5.70479275E-01	7.56605891E-03
1.02500000E+03	-4.52281138E+07	-2.31488700E+05	3.69775907E-03	7.35123194E-01	5.50626454E-03
1.05000000E+03	-5.08649426E+07	-2.19171666E+05	1.58932855E-03	8.45764634E-01	3.30160718E-03

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1.07500000E+03	-5.61761034E+07	-2.05588267E+05	-7.22454201E-04	8.97291926E-01	8.11786599E-04
1.10000000E+03	-6.11417668E+07	-1.91695870E+05	-3.18981265E-03	8.85239505E-01	-1.79057272E-03
1.12500000E+03	-6.49418803E+07	4.12412888E+04	-5.64052833E-03	8.06083090E-01	-6.11218403E-03
1.13300000E+03	-6.36879848E+07	2.69054569E+05	-6.51949921E-03	7.40371013E-01	-1.06272026E-02
1.16000000E+03	-4.76548065E+07	7.85085716E+05	-9.81533998E-03	2.54421805E-01	-2.37848367E-02
1.19000000E+03	-2.37521402E+07	7.15504799E+05	-1.27580912E-02	-7.12875146E-01	-5.20715418E-02
1.20600000E+03	-1.42371812E+07	4.60920103E+05	-1.33096469E-02	-1.78347627E+00	-9.67492021E-02
1.21200000E+03	-1.15795110E+07	4.23040007E+05	-1.33647131E-02	-2.34663857E+00	-1.42107931E-02
1.22500000E+03	-6.68526843E+06	3.28734009E+05	-1.34429750E-02	-2.53072298E+00	-1.41004430E-02
1.24200000E+03	-2.21877248E+06	1.94730630E+05	-1.34912797E-02	-2.76866888E+00	-1.38807410E-02
1.25000000E+03	-9.27979608E+05	1.27529185E+05	-1.34994321E-02	-2.87921790E+00	-1.37544905E-02
1.26418000E+03	-1.43042928E-25	1.99758007E+03	-1.35024161E-02	-3.07252733E+00	-1.35064112E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = -3.21833610E+00				
1.26418000E+03	-1.43042928E-25	1.92396369E+05	-1.35024161E-02	-3.07252733E+00	-2.43384117+317

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t=361

End Sustainer

Phase

Mode 3

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.71717883E+01	2.94870314E+02	3.46629400E+04	3.46629400E+04	3.45078300E+04	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.		-2.84998778E-02	3.02820829E-01	-2.84998778E-02
3.75000000E+02	1.19590127E+07	4.49122790E+05		-2.75287303E-02	-4.80984845E-01	-3.21342095E-02
3.85000000E+02	1.64493746E+07	4.48934035E+05		-2.67039482E-02	-7.97649099E-01	-3.11630305E-02
4.00000000E+02	2.30650532E+07	4.31902071E+05		-2.51956908E-02	-1.25138998E+00	-2.92927499E-02
4.25000000E+02	3.33484894E+07	3.87618324E+05		-2.18918223E-02	-1.93681433E+00	-2.63807432E-02
4.50000000E+02	4.22975891E+07	3.25564164E+05		-1.72467527E-02	-2.53506241E+00	-2.18451166E-02
4.75000000E+02	4.95028249E+07	2.48739011E+05		-1.20251749E-02	-2.99468923E+00	-1.51055342E-02
5.00000000E+02	5.46473174E+07	1.61422261E+05		-7.67534985E-03	-3.29882915E+00	-9.44922085E-03
5.25000000E+02	5.75193710E+07	6.75348054E+04		-4.18091856E-03	-3.47439624E+00	-4.66614577E-03
5.50000000E+02	5.79960692E+07	-2.97238824E+04		-4.36065781E-04	-3.54250129E+00	-1.74195489E-05
5.75000000E+02	5.60331523E+07	-1.26964710E+05		4.17823478E-03	-3.46774753E+00	5.96647014E-03
5.77000000E+02	5.57715629E+07	-1.34620188E+05		4.53890339E-03	-3.45534575E+00	6.43496237E-03
6.00000000E+02	5.16821062E+07	-2.20100164E+05		8.53724983E-03	-3.24679021E+00	1.16372521E-02
6.25000000E+02	4.50950069E+07	-3.05225127E+05		1.24538637E-02	-2.89051790E+00	1.67528092E-02
6.50000000E+02	3.65171114E+07	-3.78816962E+05		1.57570468E-02	-2.41562406E+00	2.10924970E-02
6.75000000E+02	2.62753593E+07	-4.37887465E+05		1.82989317E-02	-1.84395256E+00	2.44663607E-02
7.00000000E+02	1.47633263E+07	-4.80113691E+05		1.99608158E-02	-1.20162913E+00	2.67229804E-02
7.25000000E+02	2.42322896E+06	-5.03942245E+05		2.06578272E-02	-5.18017420E-01	2.77556053E-02
7.50000000E+02	-1.02743011E+07	-5.08662821E+05		2.03420444E-02	1.75453974E-01	2.75063094E-02
7.75000000E+02	-2.28519041E+07	-4.94464711E+05		1.90584085E-02	8.42325893E-01	2.53976997E-02
8.00000000E+02	-3.48508733E+07	-4.62662480E+05		1.70281010E-02	1.44618496E+00	2.23460606E-02
8.25000000E+02	-4.58554466E+07	-4.15302118E+05		1.44013544E-02	1.96703196E+00	1.91749420E-02
8.50000000E+02	-5.55061064E+07	-3.54777957E+05		1.12472390E-02	2.39536014E+00	1.51458979E-02
8.75000000E+02	-6.35075991E+07	-2.83865636E+05		7.79112166E-03	2.71632582E+00	1.06584513E-02
9.00000000E+02	-6.92218092E+07	-1.63620485E+05		4.18694001E-03	2.92113041E+00	5.71610341E-03
9.25000000E+02	-7.16084999E+07	-2.66949171E+04		6.5036744E-04	3.00209257E+00	8.65651334E-04
9.50000000E+02	-7.05480028E+07	1.11281533E+05		-2.59353306E-03	2.96915015E+00	-3.49096477E-03
9.75000000E+02	-6.60778563E+07	2.45252192E+05		-5.71135980E-03	2.82886587E+00	-7.68920006E-03
9.91000000E+02	-6.14969838E+07	3.26652143E+05		-7.57015158E-03	2.68549355E+00	-1.02044431E-02
1.00000000E+03	-5.83590332E+07	3.70399713E+05		-8.55132841E-03	2.58760234E+00	-1.15384229E-02
1.02500000E+03	-4.76683737E+07	4.82307593E+05		-1.09685887E-02	2.25645980E+00	-1.47366167E-02
1.05000000E+03	-3.43851940E+07	5.77259221E+05		-1.27766892E-02	1.85465460E+00	-1.72865269E-02

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1.07500000E+03	-1.89707369E+07	6.52421698E+05	-1.39376116E-02	1.40213395E+00	-1.88064302E-02
1.10000000E+03	-1.94422186E+06	7.06000895E+05	-1.43851221E-02	9.20860996E-01	-1.95384133E-02
1.12500000E+03	1.76686495E+07	1.12244995E+06	-1.40985766E-02	3.93982187E-01	-2.69354674E-02
1.13300000E+03	2.77544830E+07	1.36379385E+06	-1.37904561E-02	1.48920157E-01	-3.46117362E-02
1.16000000E+03	5.97076572E+07	6.07686695E+05	-1.10405871E-02	-7.14809777E-01	-2.18535177E-02
1.19000000E+03	4.91270888E+07	-1.07302783E+06	-6.11248698E-03	-5.50741928E-01	5.28450859E-02
1.20600000E+03	3.08279608E+07	-1.05238527E+06	-4.94187445E-03	1.08212091E+00	1.85569579E-01
1.21200000E+03	2.47587968E+07	-9.59426737E+05	-4.82331164E-03	2.15772469E+00	-2.90445816E-03
1.22500000E+03	1.38894913E+07	-7.13536801E+05	-4.65814436E-03	2.11793589E+00	-3.23107076E-03
1.24200000E+03	4.44233375E+06	-3.99379550E+05	-4.55930822E-03	2.05863351E+00	-3.76054912E-03
1.25000000E+03	1.82715683E+06	-2.54782450E+05	-4.54310366E-03	2.02746352E+00	-4.03353876E-03
1.26418000E+03	3.91386748E-27	-4.19573402E+03	-4.53726657E-03	1.96675842E+00	-4.52887511E-03
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 2.27301637E+00				
1.26418000E+03	3.91386748E-27	5.06079924E-10	-4.53726657E-03	1.96675842E+00	-6.40198231+312

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TRW systems

t=361.

End Sustainer
Phase
Mode 4

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ. DM	ACCELERATION
2.16157578E+01	4.67240985E+02	3.46629400E+04	3.46629400E+04	3.45341555E+04	0.	

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-2.57208472E-02	2.15719985E-01	-2.57208472E-02
3.75000000E+02	1.38793941E+07	5.06797923E+05	-2.45687390E-02	-5.14843290E-01	-2.97656414E-02
3.85000000E+02	1.89459407E+07	5.06488653E+05	-2.36156871E-02	-8.07103910E-01	-2.86464364E-02
4.00000000E+02	2.63564629E+07	4.79769612E+05	-2.18856024E-02	-1.22060042E+00	-2.64367370E-02
4.25000000E+02	3.75666806E+07	4.12630928E+05	-1.81372290E-02	-1.82640532E+00	-2.29158153E-02
4.50000000E+02	4.67849857E+07	3.21194423E+05	-1.29523940E-02	-2.32718093E+00	-1.74890384E-02
4.75000000E+02	5.34698994E+07	2.11128329E+05	-7.23999700E-03	-2.66611001E+00	-9.85458931E-03
5.00000000E+02	5.72509702E+07	9.01592937E+04	-2.60707212E-03	-2.83096656E+00	-3.59783359E-03
5.25000000E+02	5.79445684E+07	-3.48525286E+04	9.89109867E-04	-2.85636676E+00	1.23951994E-03
5.50000000E+02	5.55196353E+07	-1.58466516E+05	4.65742295E-03	-2.76233144E+00	6.88934571E-03
5.75000000E+02	5.00838425E+07	-2.74589197E+05	8.93515410E-03	-2.51494978E+00	1.28026076E-02
5.77000000E+02	4.95258811E+07	-2.83356969E+05	9.25648522E-03	-2.48889893E+00	1.32474284E-02
6.00000000E+02	4.19066712E+07	-3.76760225E+05	1.26616294E-02	-2.12844361E+00	1.79681114E-02
6.25000000E+02	3.14093381E+07	-4.59348897E+05	1.56318074E-02	-1.62516080E+00	2.21015101E-02
6.50000000E+02	1.91403507E+07	-5.17849725E+05	1.76799380E-02	-1.03389836E+00	2.49735961E-02
6.75000000E+02	5.74411353E+06	-5.49132281E+05	1.86886035E-02	-3.88359669E-01	2.64228610E-02
7.00000000E+02	-8.07581425E+06	-5.51617264E+05	1.85950006E-02	2.74656009E-01	2.63642578E-02
7.25000000E+02	-2.15968370E+07	-5.25369225E+05	1.73941082E-02	9.17230286E-01	2.47936748E-02
7.50000000E+02	-3.41186609E+07	-4.72101078E+05	1.51385574E-02	1.50235776E+00	2.17878684E-02
7.75000000E+02	-4.50036872E+07	-3.95111178E+05	1.20476884E-02	1.99270763E+00	1.71132163E-02
8.00000000E+02	-5.37174335E+07	-2.99290227E+05	8.56283945E-03	2.36114041E+00	1.20029570E-02
8.25000000E+02	-5.98575533E+07	-1.90171613E+05	4.86056694E-03	2.60034025E+00	7.04644755E-03
8.50000000E+02	-6.31619910E+07	-7.33787315E+04	1.02549630E-03	2.71067710E+00	1.83185598E-03
8.75000000E+02	-6.35097530E+07	4.54295673E+04	-2.66186512E-03	2.69338227E+00	-3.12074963E-03
9.00000000E+02	-6.03020780E+07	2.22025382E+05	-6.03558787E-03	2.55310183E+00	-8.11059144E-03
9.25000000E+02	-5.24922050E+07	3.99618812E+05	-8.88330743E-03	2.29591012E+00	-1.21060398E-02
9.50000000E+02	-4.05054523E+07	5.55101904E+05	-1.10116232E-02	1.94942010E+00	-1.54882514E-02
9.75000000E+02	-2.49720372E+07	6.82446865E+05	-1.25118137E-02	1.52863558E+00	-1.80154175E-02
9.91000000E+02	-1.35180185E+07	7.46988175E+05	-1.30741727E-02	1.23113221E+00	-1.90982709E-02
1.00000000E+03	-6.65633755E+06	7.77068844E+05	-1.32396047E-02	1.05729990E+00	-1.95062889E-02
1.02500000E+03	1.35855981E+07	8.36266737E+05	-1.30885682E-02	5.63258795E-01	-1.96219020E-02
1.05000000E+03	3.48580366E+07	8.59656705E+05	-1.20283427E-02	8.11615070E-02	-1.87444107E-02

t361, 4/8

7700 SYSTEM

1.07500000E+03	5.62847236E+07	8.49113870E+05	-1.00622877E-02	-3.59660045E-01	-1.63989583E-02
1.10000000E+03	7.70651098E+07	8.08792233E+05	-7.25826891E-03	-7.31161490E-01	-1.31618619E-02
1.12500000E+03	9.19967333E+07	-4.79818817E+05	-3.91014568E-03	-9.88642786E-01	1.57729877E-03
1.13300000E+03	8.27884105E+07	-1.80038830E+06	-2.70719407E-03	-8.90498455E-01	2.47796502E-02
1.16000000E+03	-2.84550108E+06	-3.24919452E+06	-4.02354020E-04	4.93281625E-01	5.74124951E-02
1.19000000E+03	-5.08595251E+07	1.40646968E+05	-3.51285191E-03	1.41838483E+00	-1.12407073E-02
1.20600000E+03	-3.75800276E+07	1.19559754E+06	-4.81498009E-03	-4.85365263E-02	-2.21251899E-01
1.21200000E+03	-3.05566975E+07	1.12404297E+06	-4.96036709E-03	-1.35289213E+00	-7.20845303E-03
1.22500000E+03	-1.75832520E+07	8.69080988E+05	-5.16657970E-03	-1.44478598E+00	-6.90474168E-03
1.24200000E+03	-5.81300692E+06	5.11179068E+05	-5.29341177E-03	-1.55742544E+00	-6.31576990E-03
1.25000000E+03	-2.42961900E+06	3.33748630E+05	-5.31476132E-03	-1.60663693E+00	-5.98225858E-03
1.26418000E+03	-1.42751511E-24	6.27358605E+03	-5.32258708E-03	-1.68694212E+00	-5.33513425E-03
1.26418000E+03	TOTAL DEFLECTION OF THE SPRING MASS SYSTEM = -2.14486810E+00				
1.26418000E+03	-1.42751511E-24	6.76373780E-05	-5.32258708E-03	-1.68694212E+00	-8.55622357+317

t361,4

TRW SYSTEMS

t=361
End Sustainer.
Phase
Mode 5

Atlas SLV3A/Burner 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.13334661E+01	9.81786100E+02	3.46629400E+04	3.46629400E+04	3.45177541E+04	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
3.51200000E+02	0.	0.	-2.48991988E-02	1.38854800E-01	-2.48991988E-02
3.75000000E+02	2.00016816E+07	6.84886138E+05	-2.31601782E-02	-6.11658860E-01	-3.01832662E-02
3.85000000E+02	2.68470524E+07	6.84139918E+05	-2.17998678E-02	-9.05819352E-01	-2.85951561E-02
4.00000000E+02	3.66763936E+07	6.22714877E+05	-1.93709461E-02	-1.31039835E+00	-2.52780715E-02
4.25000000E+02	5.05096475E+07	4.75518623E+05	-1.42430194E-02	-1.86065389E+00	-1.97498940E-02
4.50000000E+02	6.00891624E+07	2.84937947E+05	-7.42836161E-03	-2.24761539E+00	-1.14529089E-02
4.75000000E+02	6.45431611E+07	6.90578774E+04	-2.96063345E-04	-2.40012614E+00	-1.15126926E-03
5.00000000E+02	6.35178654E+07	-1.49918031E+05	5.08828900E-03	-2.32527840E+00	6.73573989E-03
5.25000000E+02	5.71738201E+07	-3.53887375E+05	8.87705884E-03	-2.08421765E+00	1.14196853E-02
5.50000000E+02	4.60537825E+07	-5.29742750E+05	1.21802641E-02	-1.69641461E+00	1.96414296E-02
5.75000000E+02	3.10600858E+07	-6.61191611E+05	1.53118082E-02	-1.13906247E+00	2.46243661E-02
5.77000000E+02	2.97294364E+07	-6.69396887E+05	1.55079122E-02	-1.08949977E+00	2.49360374E-02
6.00000000E+02	1.34643731E+07	-7.36385880E+05	1.71197994E-02	-4.82880253E-01	2.74914315E-02
6.25000000E+02	-5.23428946E+06	-7.48775016E+05	1.74537417E-02	2.15796154E-01	2.79998687E-02
6.50000000E+02	-2.34397465E+07	-6.97197015E+05	1.62888534E-02	8.97056204E-01	2.61085296E-02
6.75000000E+02	-3.95956197E+07	-5.85972354E+05	1.37283931E-02	1.50253721E+00	2.19815249E-02
7.00000000E+02	-5.23186426E+07	-4.24529059E+05	9.99501294E-03	1.98041769E+00	1.59742955E-02
7.25000000E+02	-6.05170512E+07	-2.26590646E+05	5.41188714E-03	2.28985370E+00	8.60330470E-03
7.50000000E+02	-6.34838937E+07	-8.99620793E+03	3.75242993E-04	2.40447844E+00	5.01950147E-04
7.75000000E+02	-6.09572138E+07	2.09770817E+05	-4.52032185E-03	2.31681364E+00	-7.20969131E-03
8.00000000E+02	-5.31331499E+07	4.12085890E+05	-8.56907913E-03	2.05323929E+00	-1.33056986E-02
8.25000000E+02	-4.06092208E+07	5.83712426E+05	-1.16359042E-02	1.65502763E+00	-1.83452425E-02
8.50000000E+02	-2.42957010E+07	7.13717717E+05	-1.36711624E-02	1.15625288E+00	-2.15142143E-02
8.75000000E+02	-5.33144539E+06	7.94988479E+05	-1.45485455E-02	6.05582776E-01	-2.25787322E-02
9.00000000E+02	1.51915767E+07	8.37976823E+05	-1.42967431E-02	4.54599483E-02	-2.21283022E-02
9.25000000E+02	3.58797604E+07	8.03543433E+05	-1.30322300E-02	-4.81690615E-01	-1.95124189E-02
9.50000000E+02	5.47429484E+07	6.93894295E+05	-1.09622229E-02	-9.35532549E-01	-1.65581447E-02
9.75000000E+02	7.00473341E+07	5.21157567E+05	-8.10969880E-03	-1.29880531E+00	-1.23125824E-02
9.91000000E+02	7.73174446E+07	3.84799615E+05	-5.96092018E-03	-1.47028226E+00	-9.06414289E-03
1.00000000E+03	8.04088547E+07	3.01510993E+05	-4.66941105E-03	-1.54308737E+00	-7.10095132E-03
1.02500000E+03	8.48968249E+07	5.48108095E+04	-8.94484060E-04	-1.64917488E+00	-1.32269351E-03
1.05000000E+03	8.31063756E+07	-1.97070508E+05	2.81284244E-03	-1.61104369E+00	4.35245578E-02

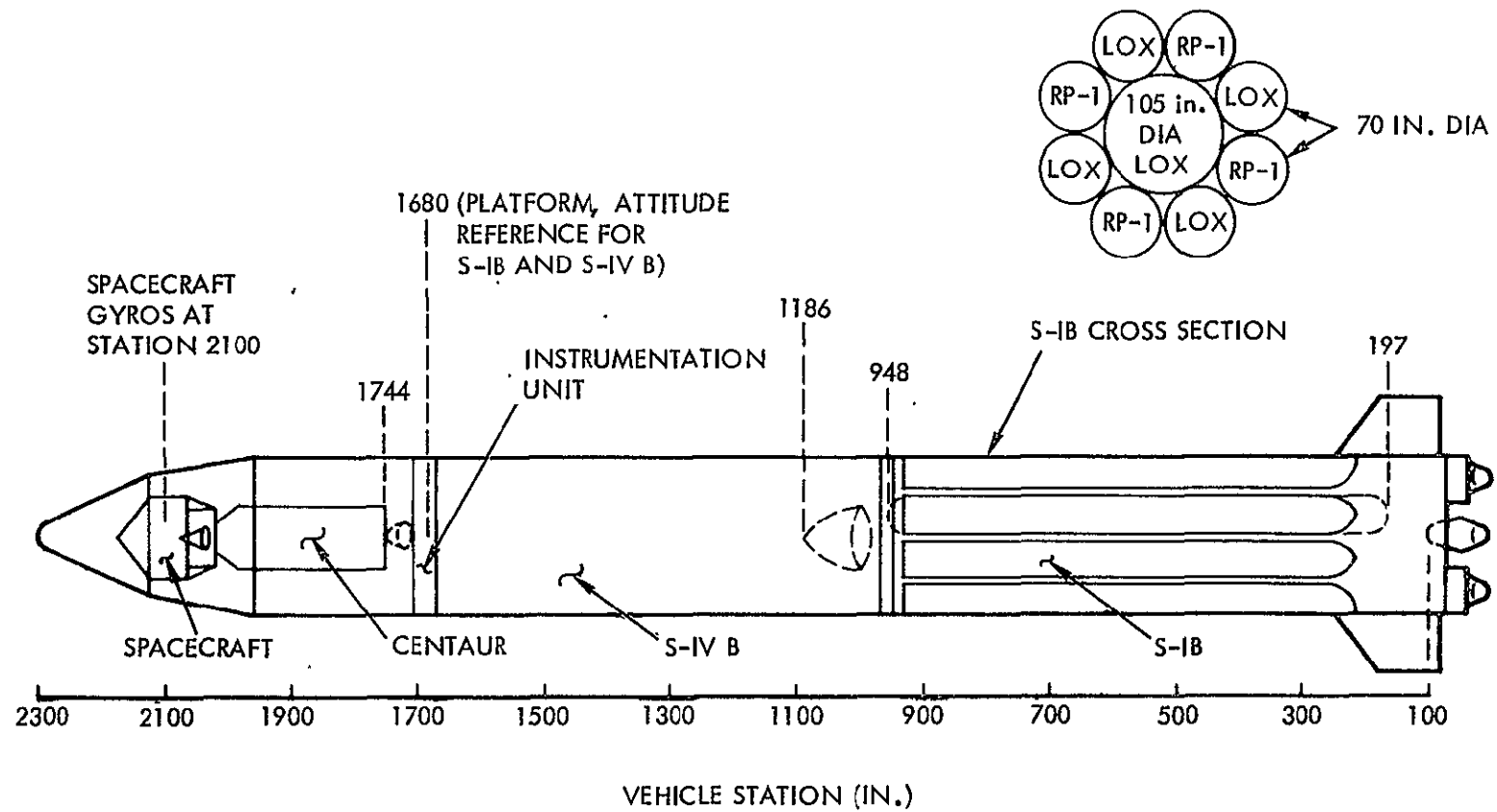
5361, 62

TIPW SYSTEMS

1.07500000E+03	7.51814079E+07	-4.32464851E+05	6.25291163E-03	-1.43673575E+00	9.48026126E-03
1.10000000E+03	6.17848613E+07	-6.31758860E+05	9.15295758E-03	-1.14386286E+00	1.37643361E-02
1.12500000E+03	3.59889594E+07	-2.83487399E+06	1.11662697E-02	-6.51948487E-01	4.35872857E-02
1.13300000E+03	7.35041755E+06	-4.10203401E+06	1.14709088E-02	-1.81101205E-01	7.40973823E-02
1.16000000E+03	-5.43551606E+07	1.51258417E+06	9.12645580E-03	1.08816409E+00	-1.77878533E-02
1.19000000E+03	6.22215911E+07	2.95907568E+06	9.42868117E-03	-1.79722083E+00	-1.53157895E-01
1.20600000E+03	6.66240666E+07	-1.89926008E+06	1.13439650E-02	-1.32796067E+00	3.55163676E-01
1.21200000E+03	5.50020920E+07	-1.89966860E+06	1.16036728E-02	8.40111036E-01	1.54030101E-02
1.22500000E+03	3.25628009E+07	-1.53987064E+06	1.19797425E-02	1.03849249E+00	1.50594837E-02
1.24200000E+03	1.11634164E+07	-9.56932584E+05	1.22181635E-02	1.28731738E+00	1.41320287E-02
1.25000000E+03	4.75644649E+06	-6.40463348E+05	1.22594915E-02	1.39806465E+00	1.35404182E-02
1.26418000E+03	1.12166014E-28	-1.76288904E+04	1.22750157E-02	1.58158039E+00	1.23102734E-02
1.26418000E+03	TOTAL DEFELECTION OF THE SPRING MASS SYSTEM = 2.86836070E+00				
1.26418000E+03	1.12166014E-28	4.98578382E-08	1.22750157E-02	1.58158039E+00	-6.30708675+314

5361,5

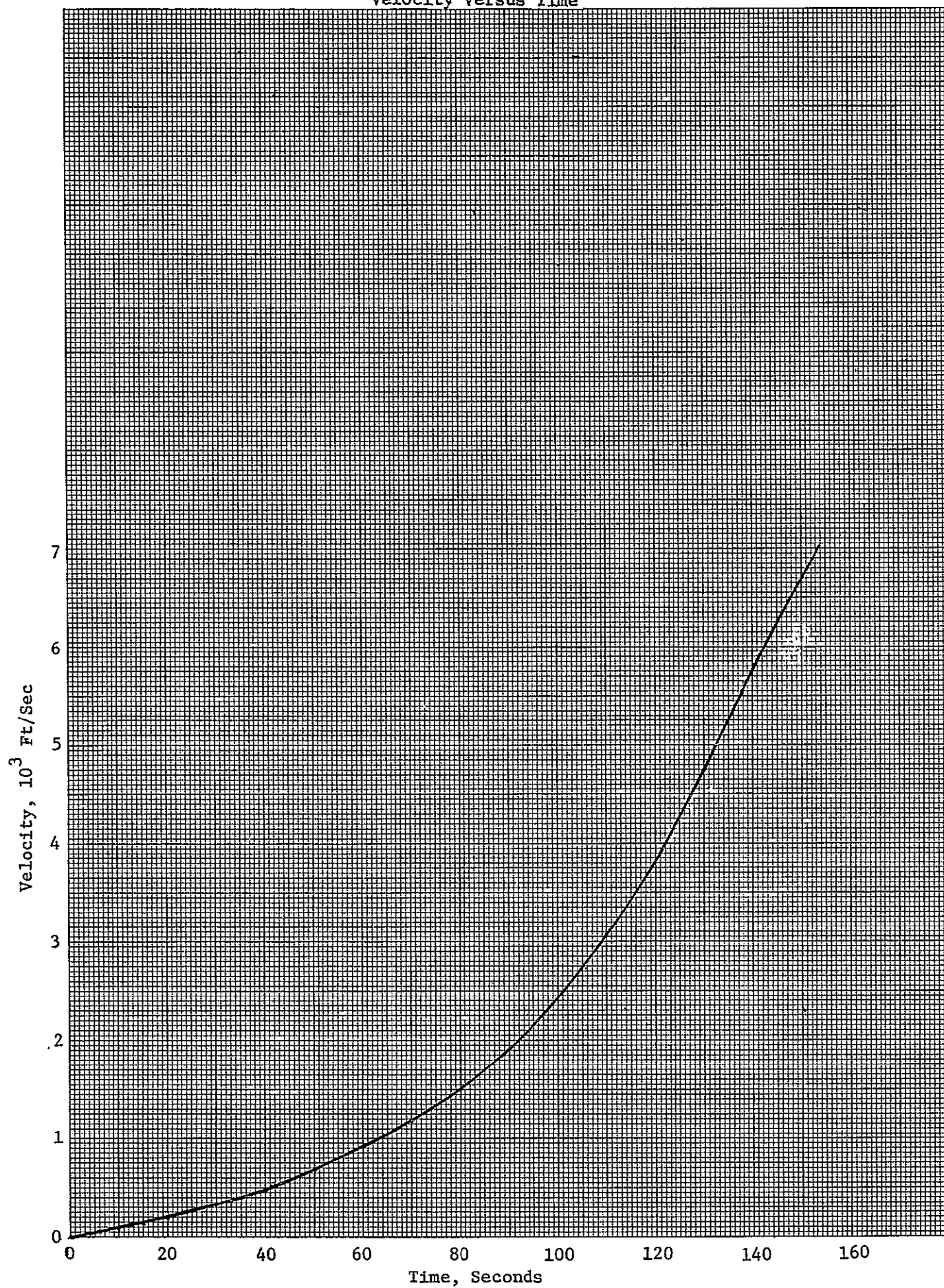
SATURN 1B/CENTAUR

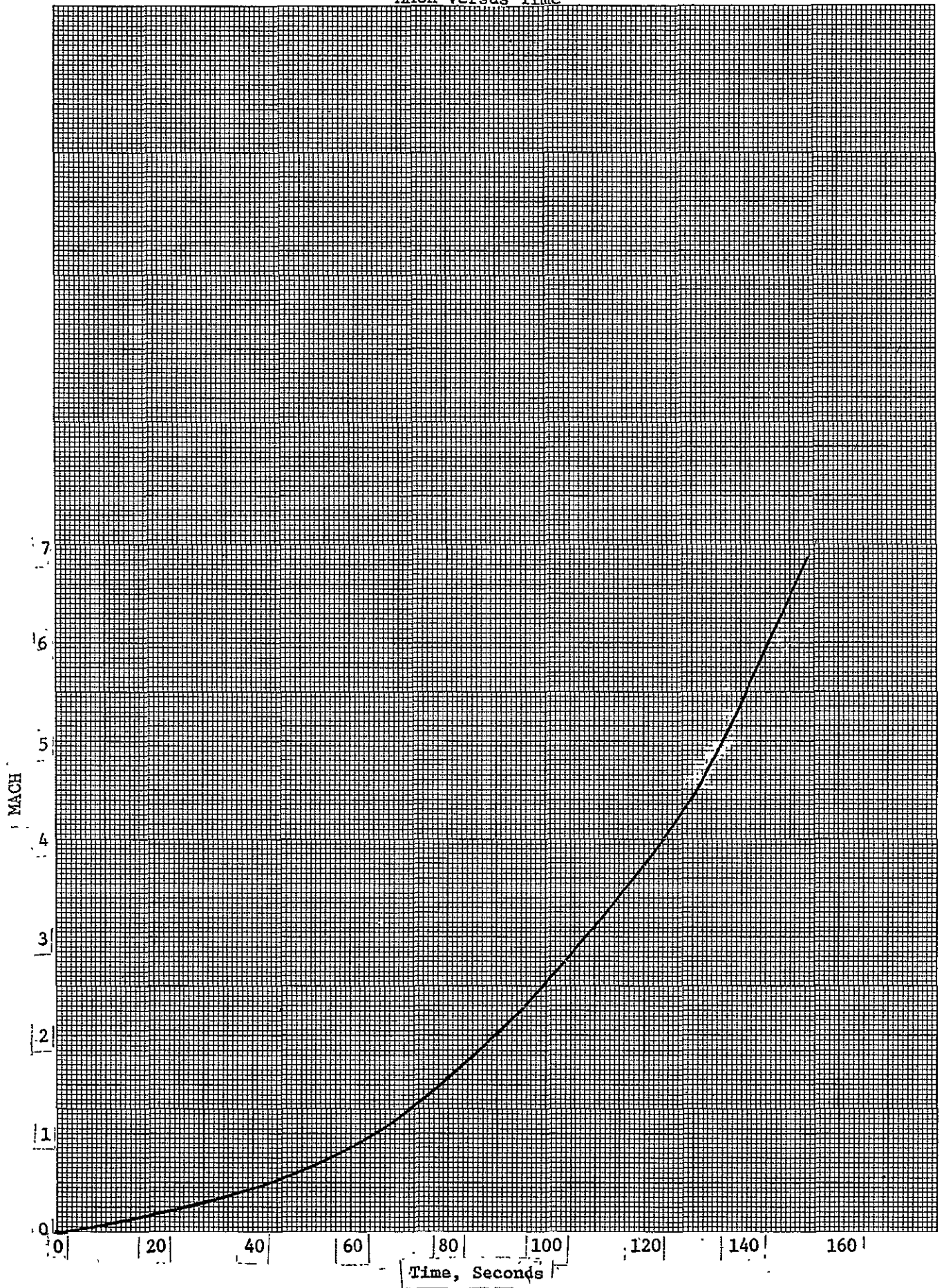


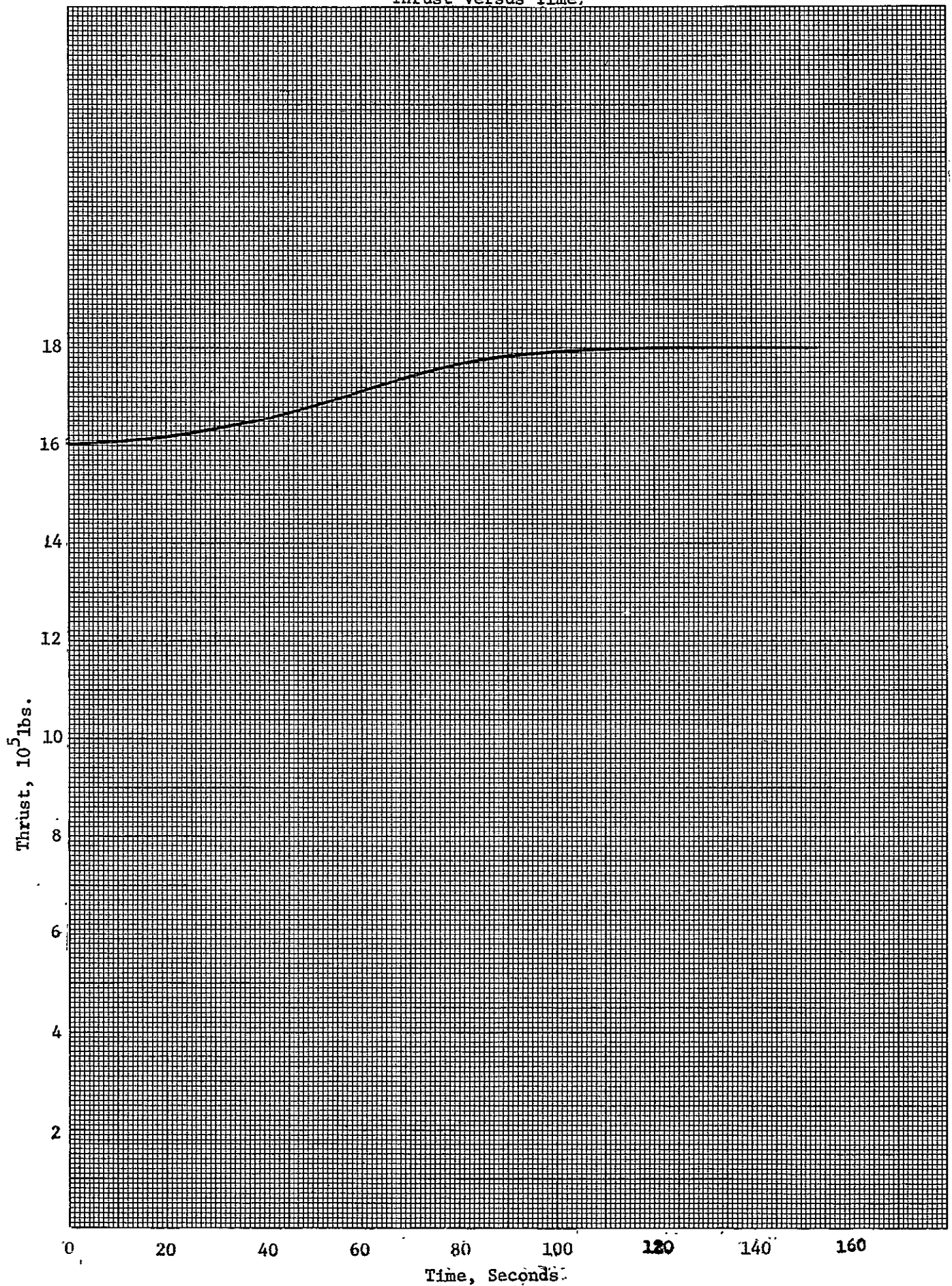
Saturn IB/Centaur General Configuration

SATURN 1B/CENTIAHE,
Velocity Versus Time

344

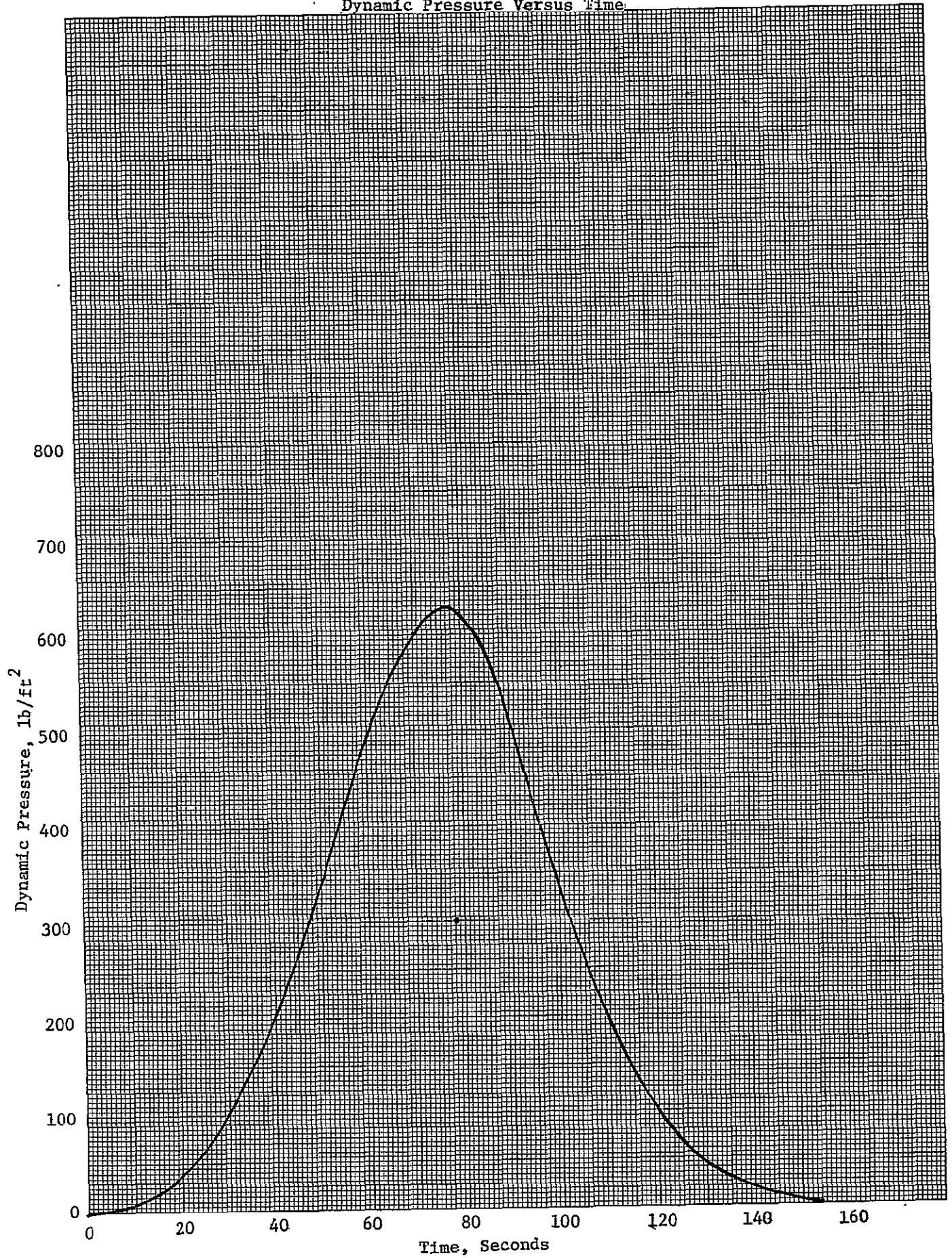






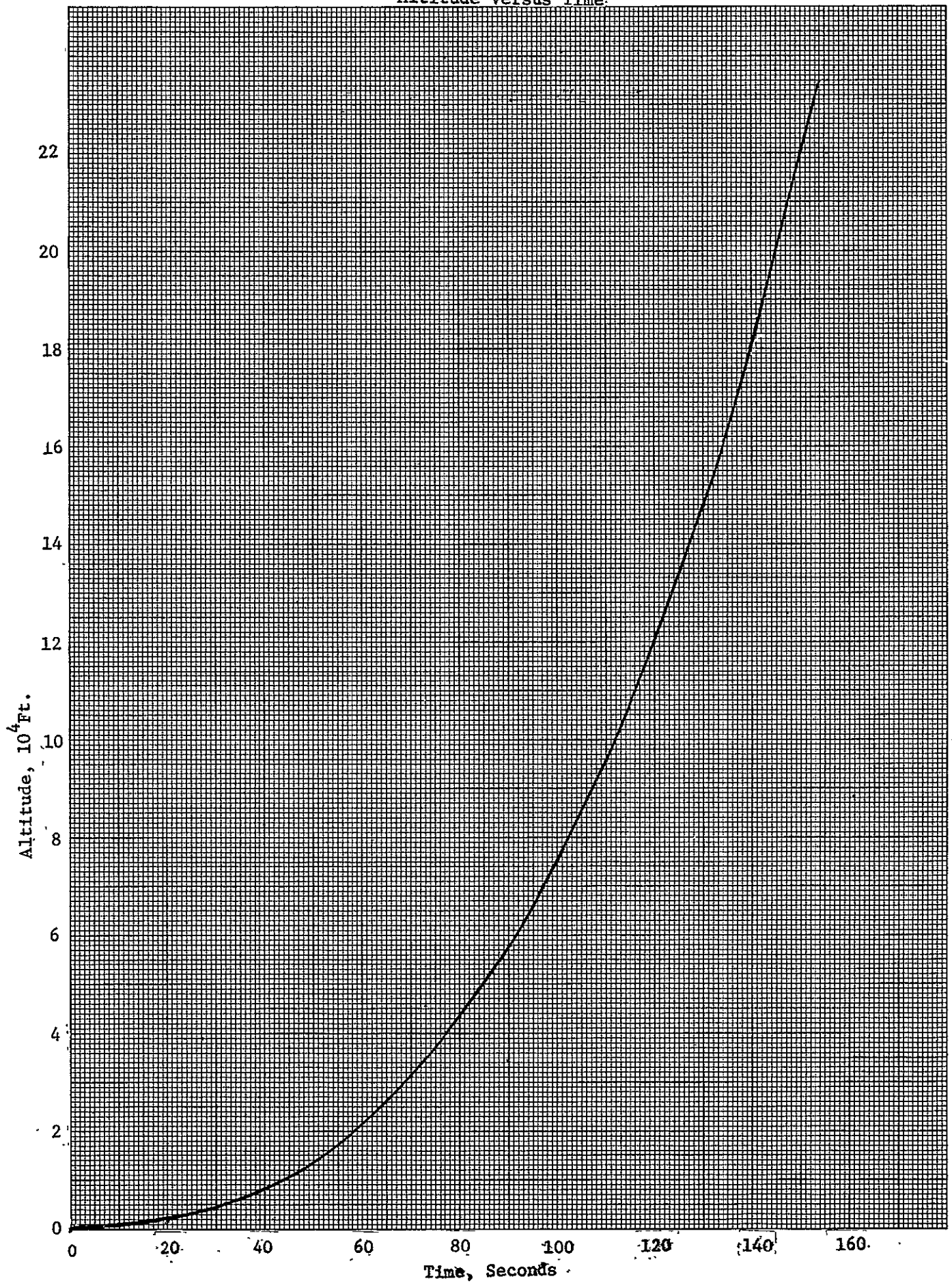
SATURN 1B/CENTAUR,
Dynamic Pressure Versus Time

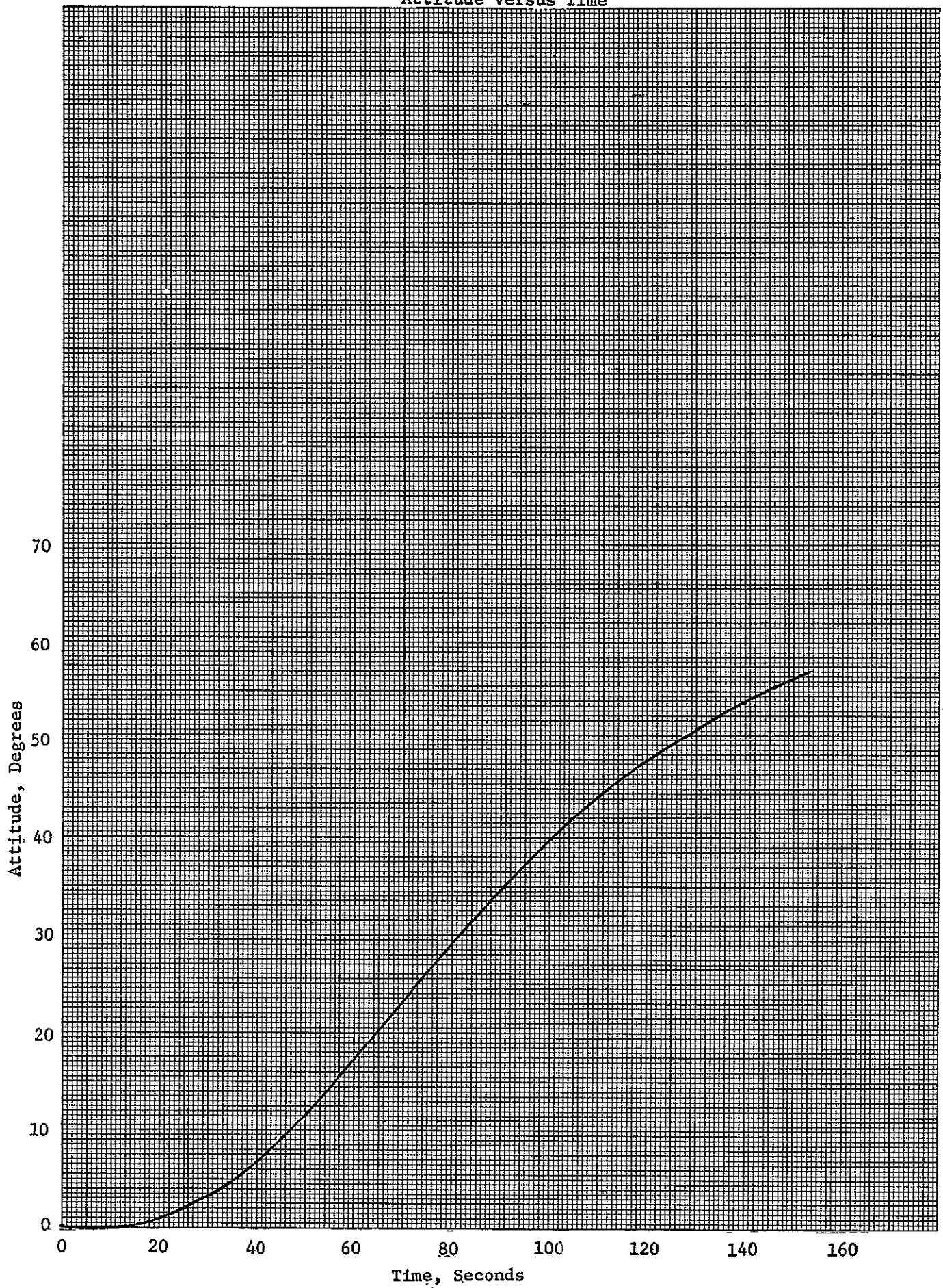
347

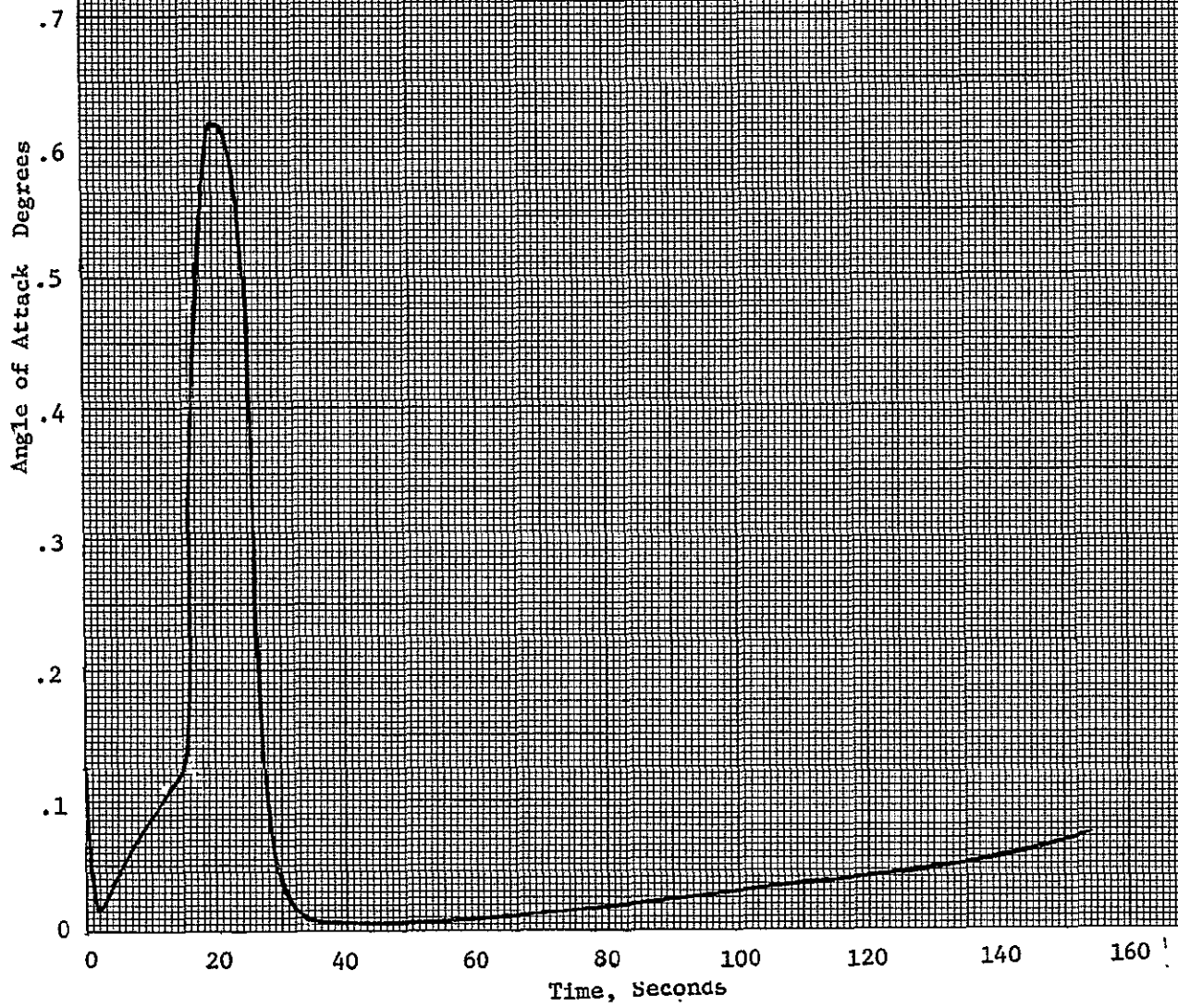


SATURN 1B/CENTAUR,
Altitude Versus Time.

348

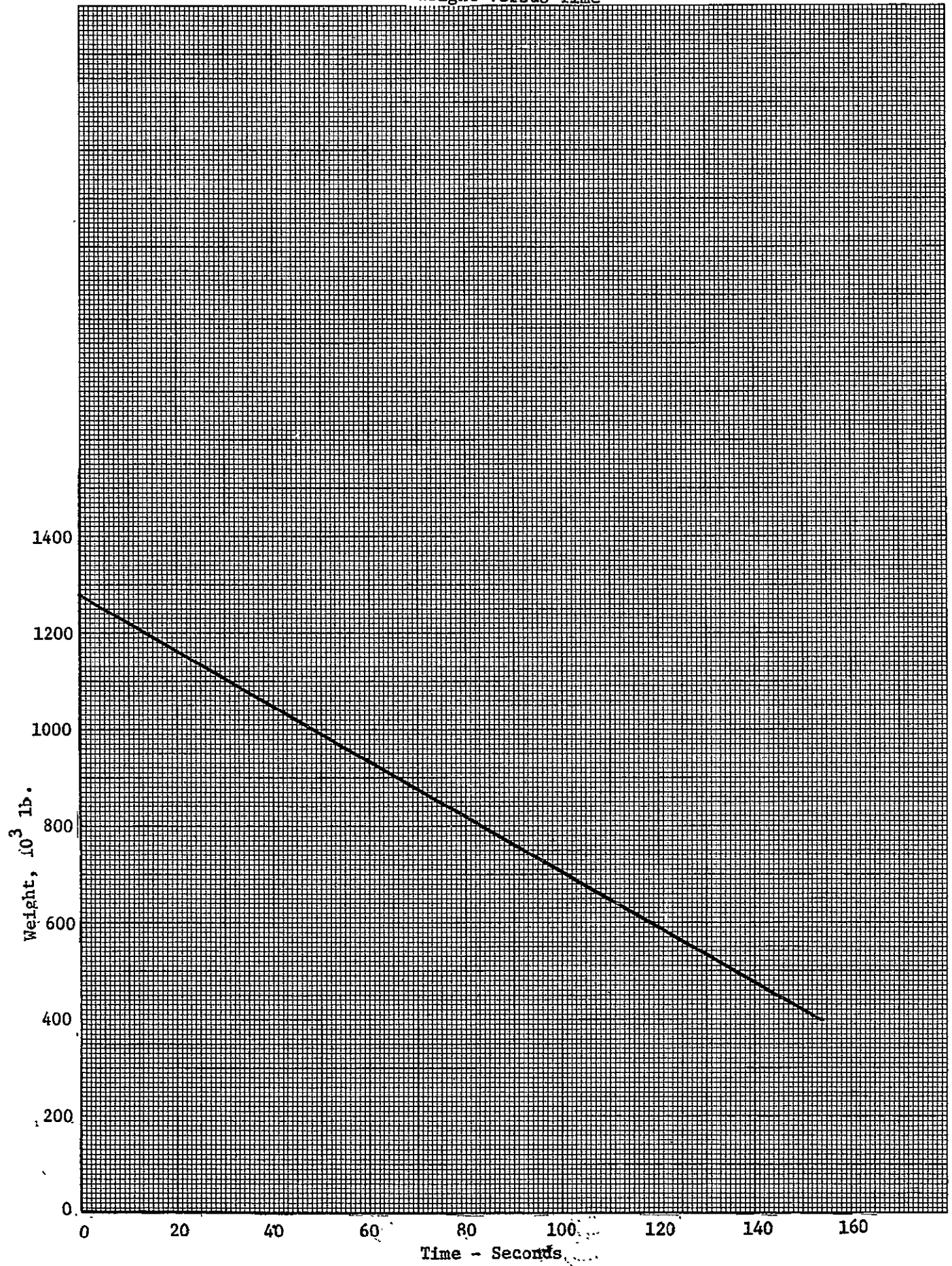


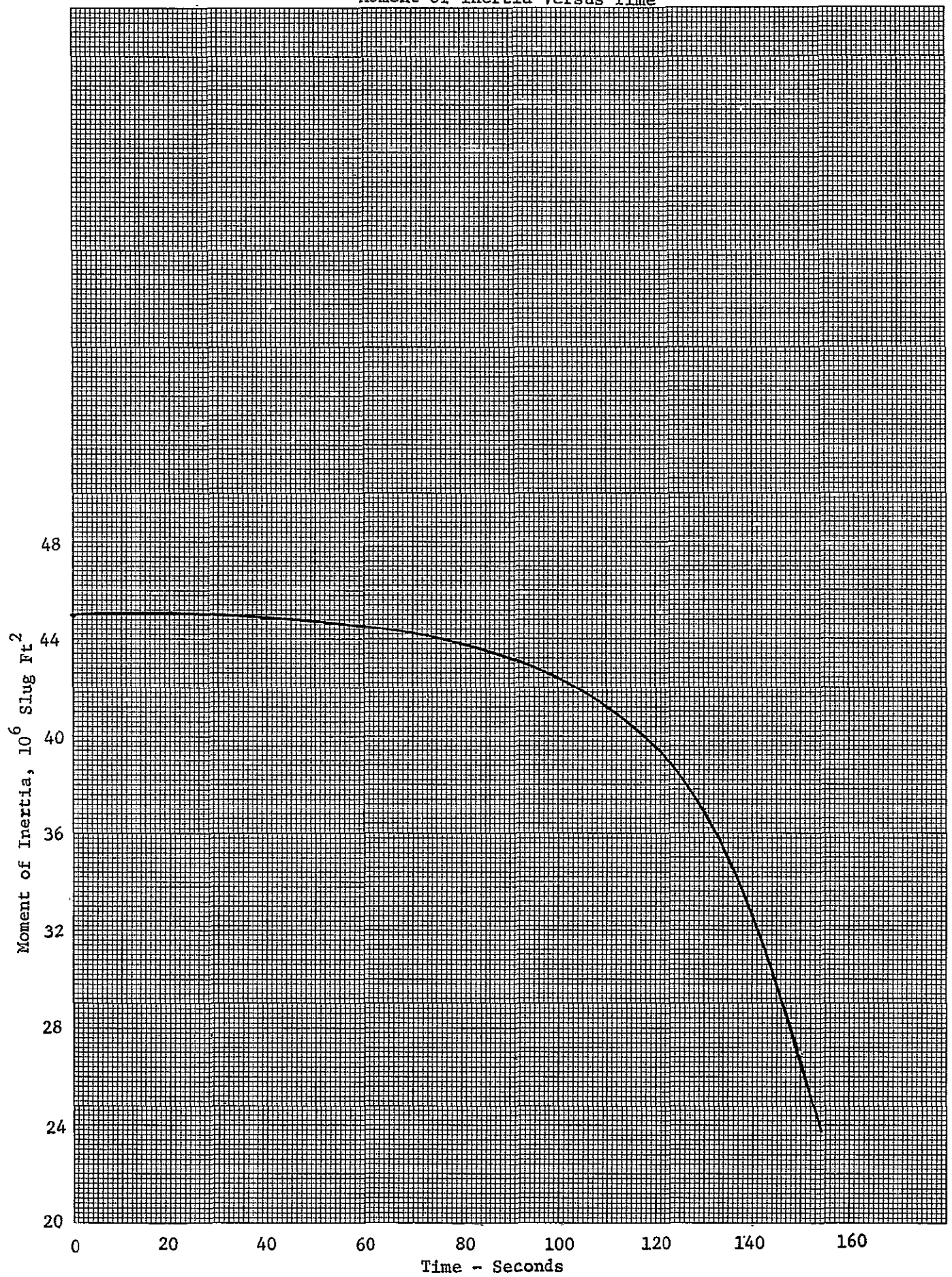


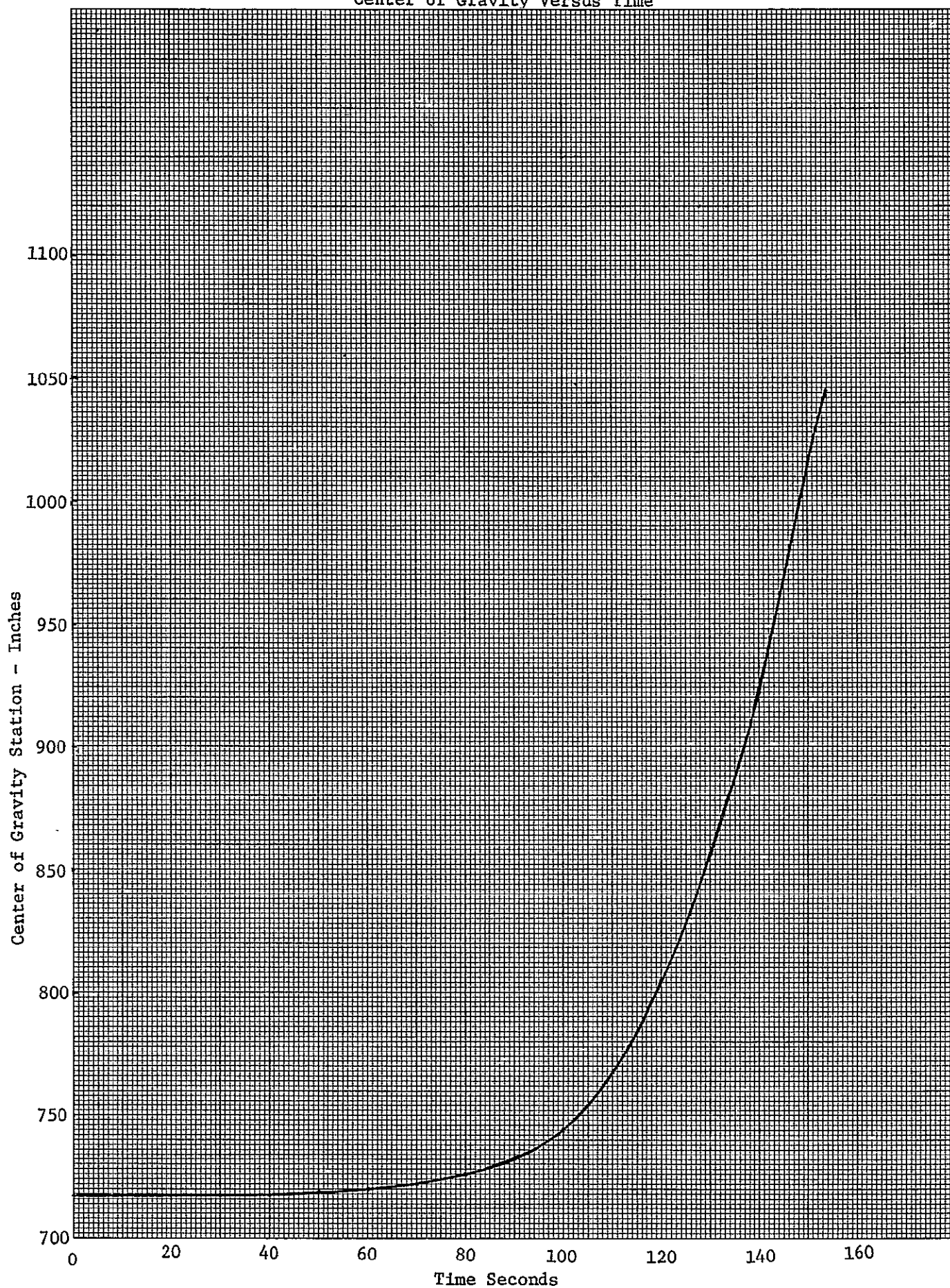


Saturn 1B/Centaur
Weight Versus Time

351

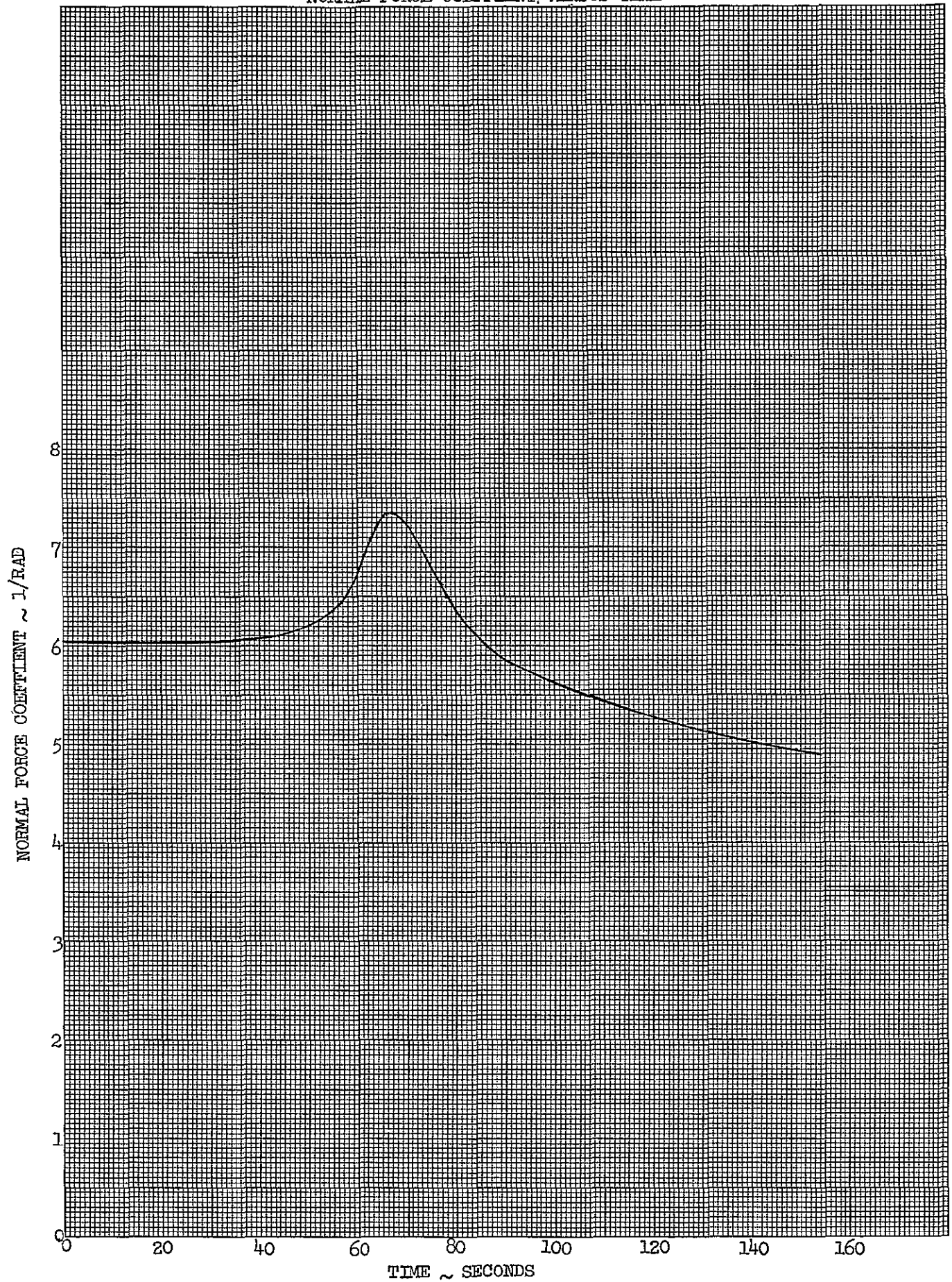






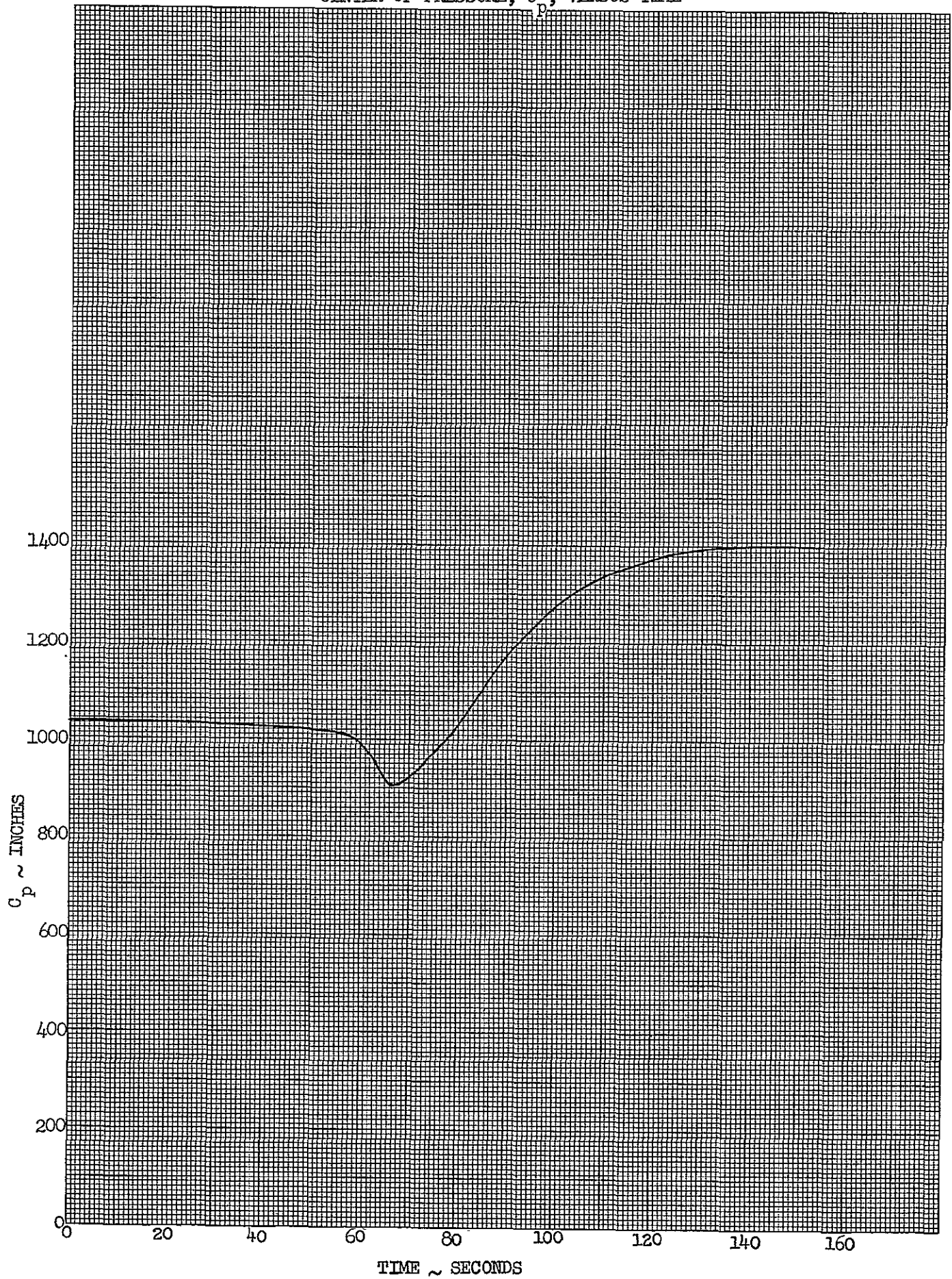
SATURN 1B/CENTAUR
NORMAL FORCE COEFFICIENT, VERSUS TIME

354

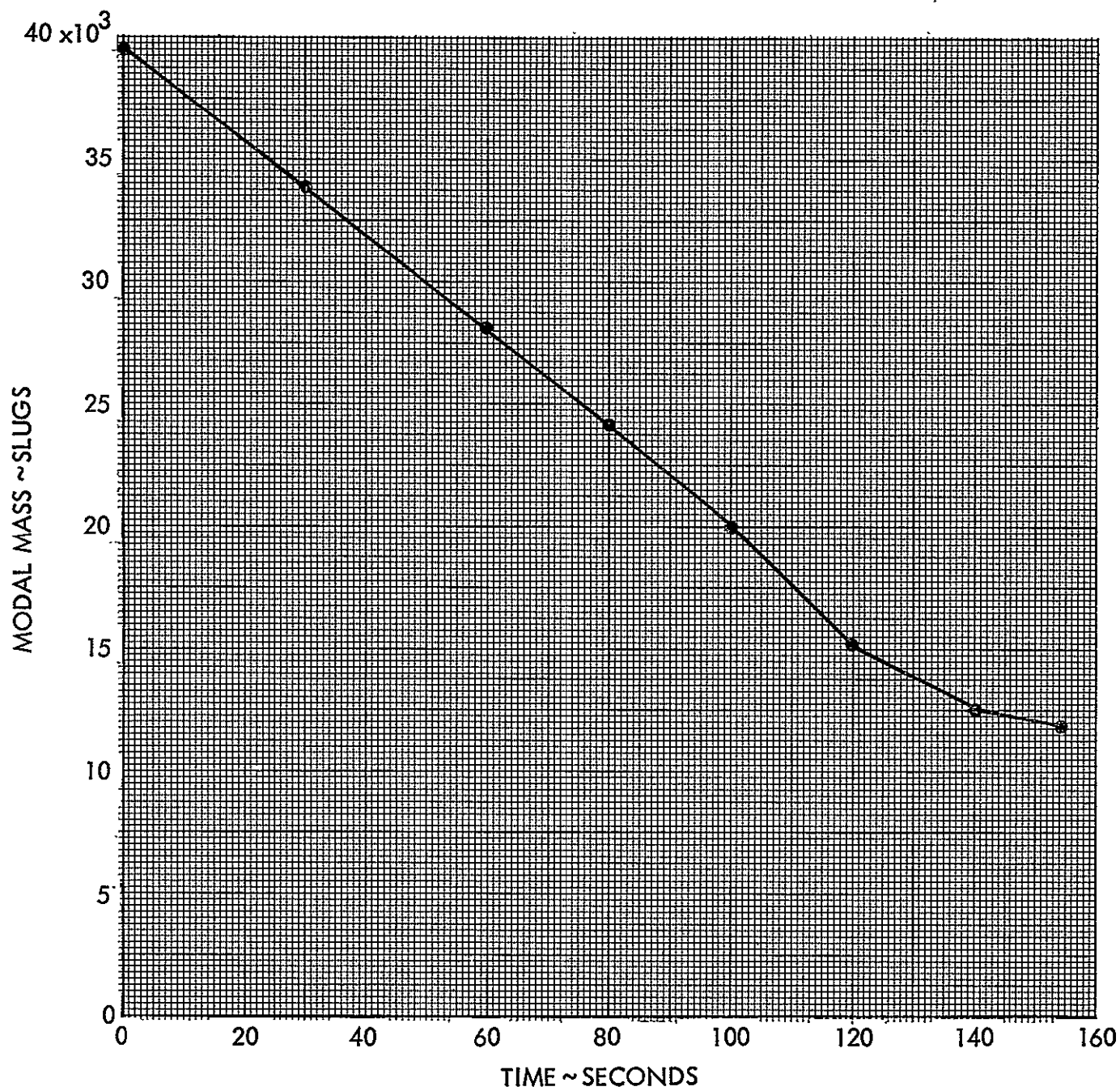


SATURN 1B/CENTAUR
CENTER OF PRESSURE, C_p , VERSUS TIME

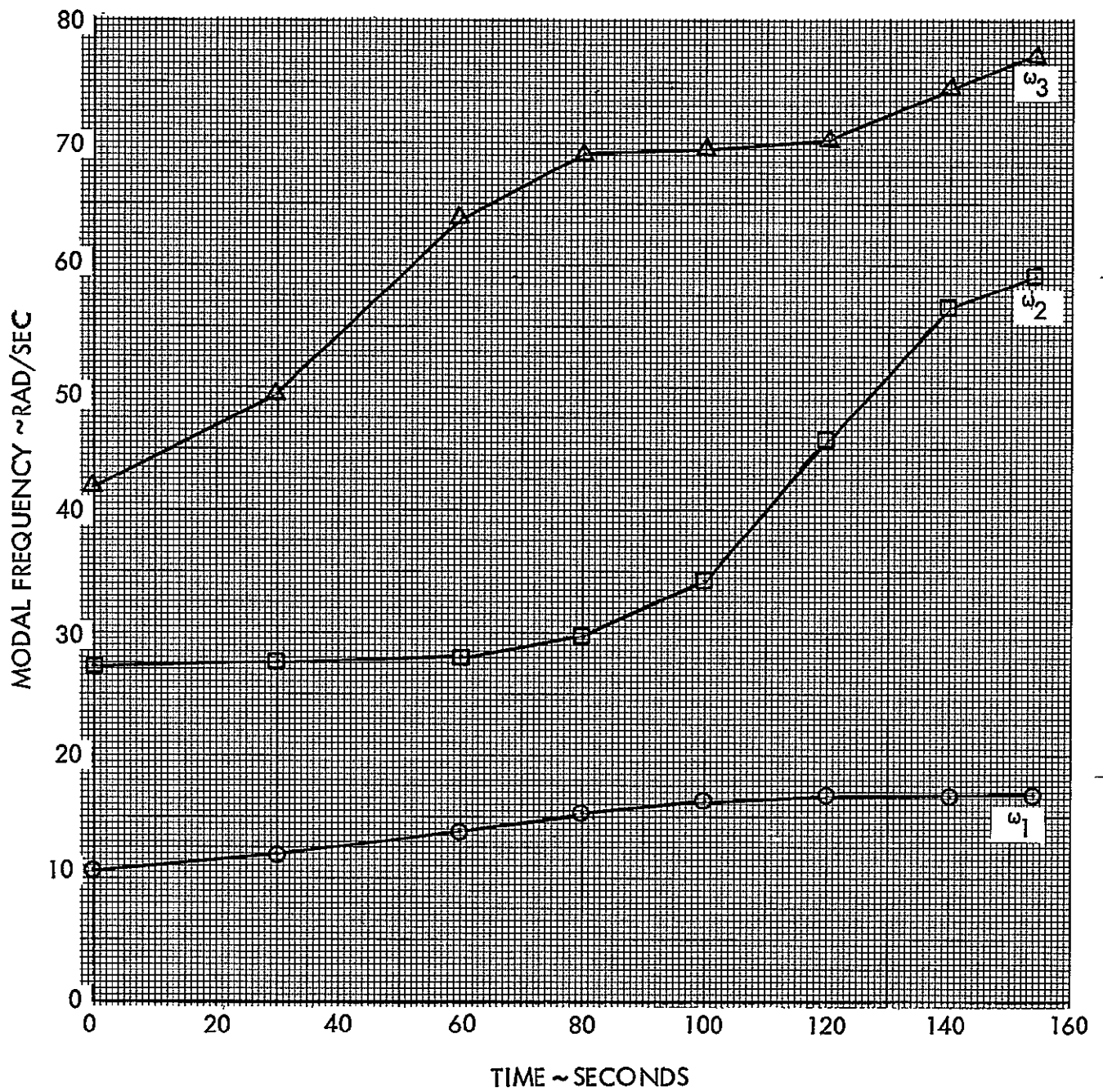
355



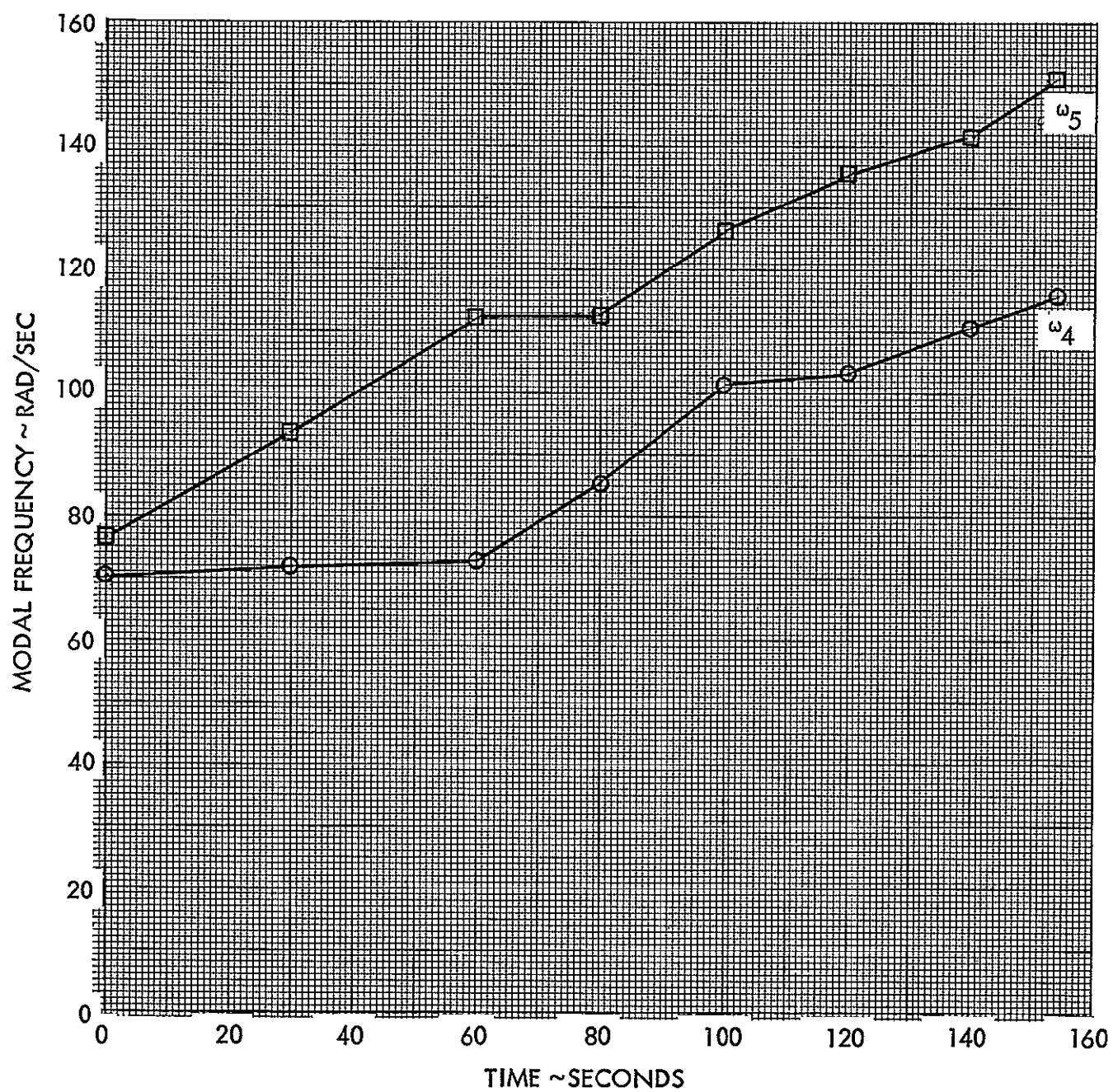
SATURN IB/CENTAUR, BENDING MODAL MASS VERSUS TIME



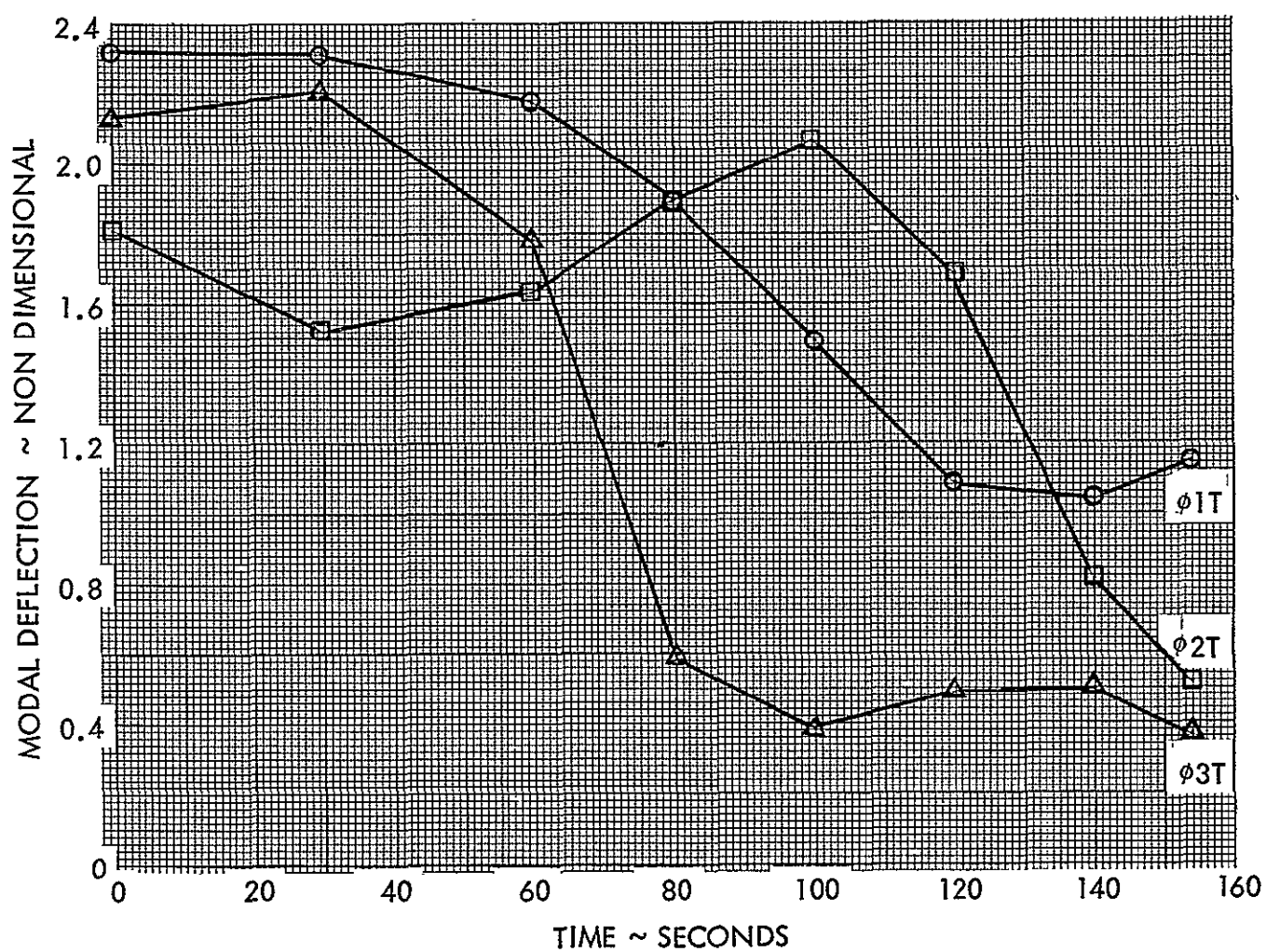
SATURN IB/CENTAUR BENDING MODAL FREQUENCIES
($\omega_1, \omega_2, \omega_3$) VERSUS TIME



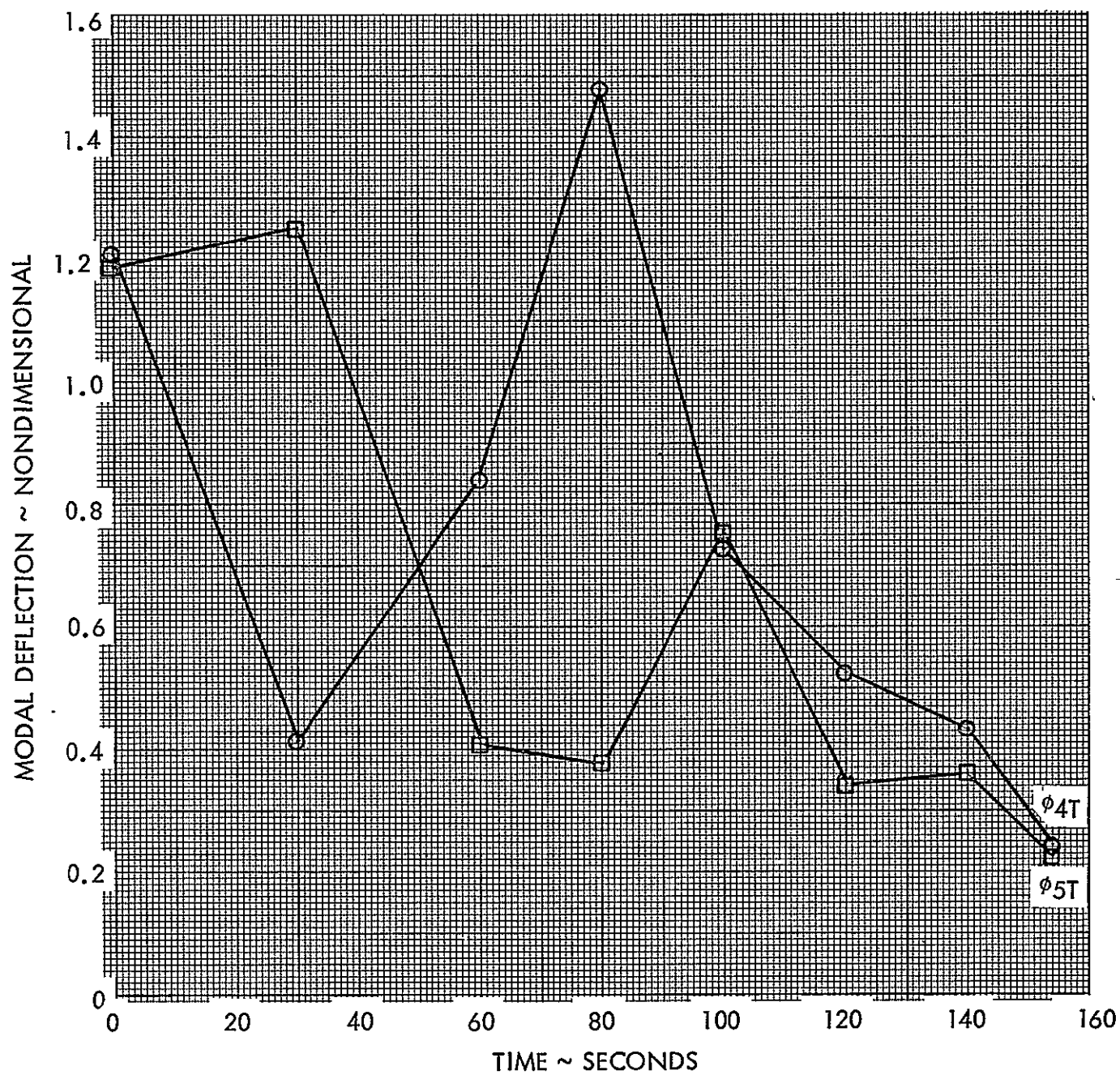
SATURN IB/CENTAUR BENDING MODE FREQUENCIES
(ω_4 , ω_5) VERSUS TIME



SATURN IB/CENTAUR, MODAL DEFLECTION AT THE ENGINE GIMBAL
(ϕ_{1T} , ϕ_{2T} , ϕ_{3T})



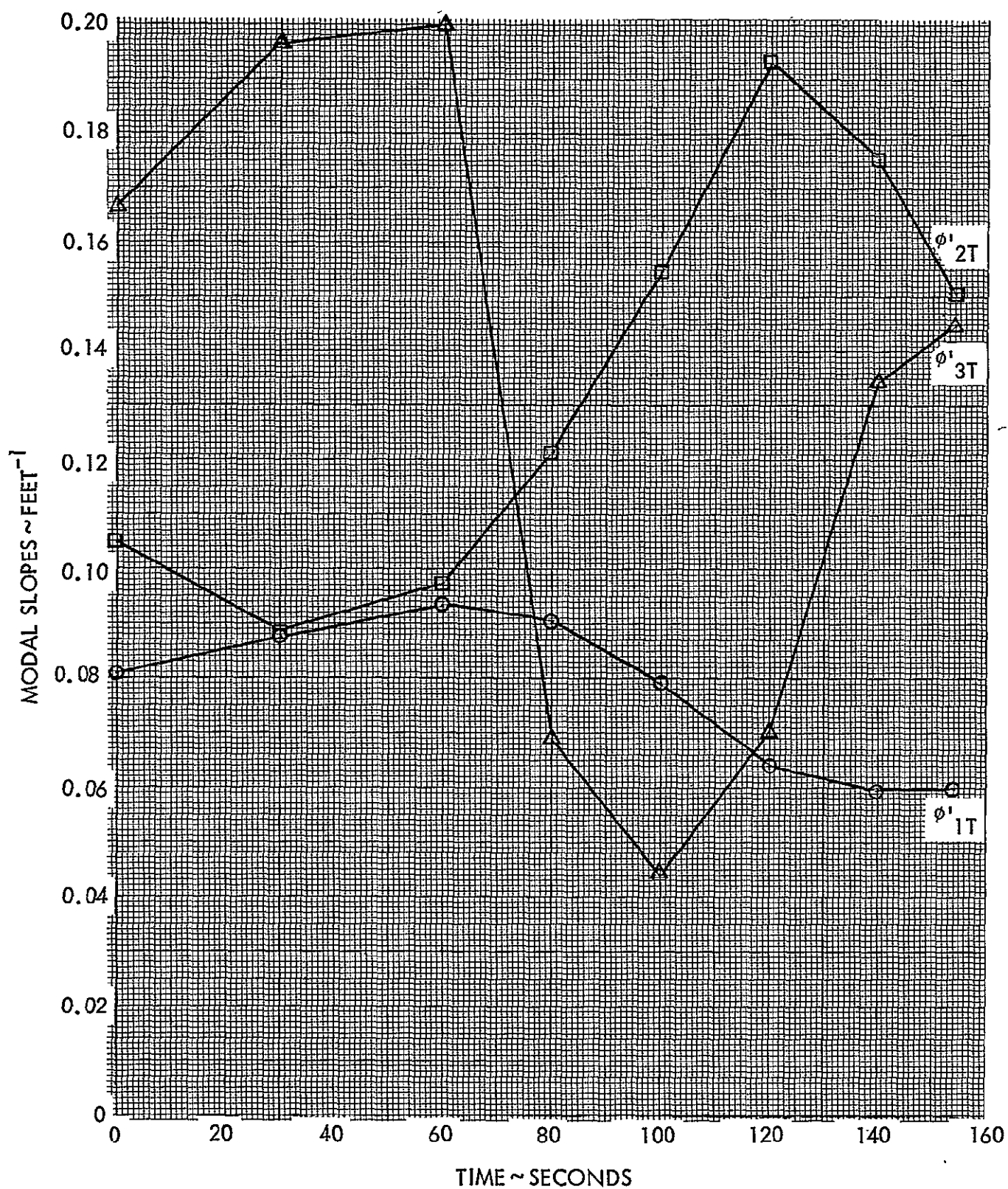
SATURN IB/CENTAUR, MODAL DEFLECTION AT ENGINE GIMBAL (ϕ_{4T} , ϕ_{5T})
STATION 100



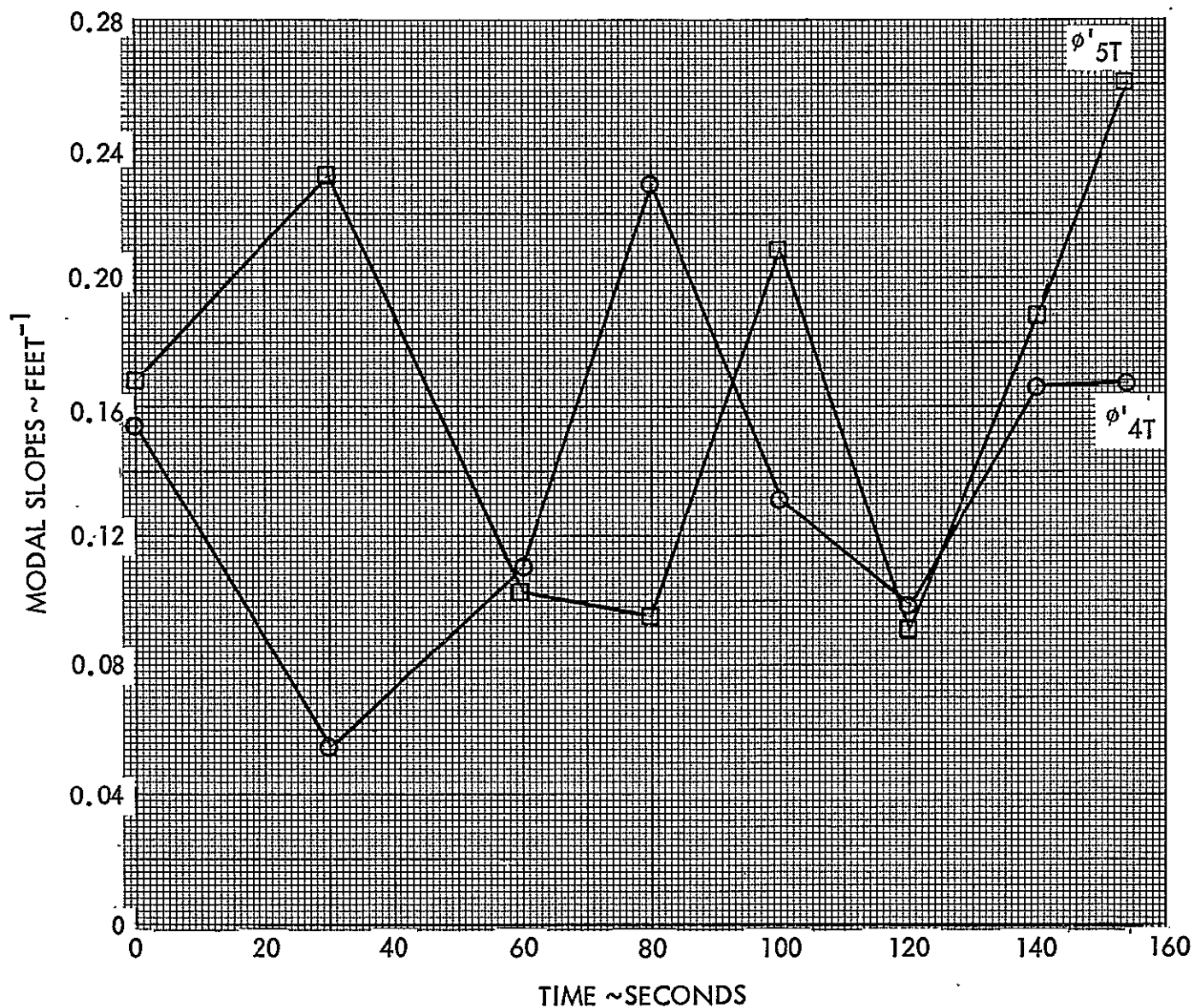
SATURN IB/CENTAUR, MODAL SLOPES AT THE ENGINE GIMBAL

 $(\phi'_{1T}, \phi'_{2T}, \phi'_{3T})$ VERSUS TIME

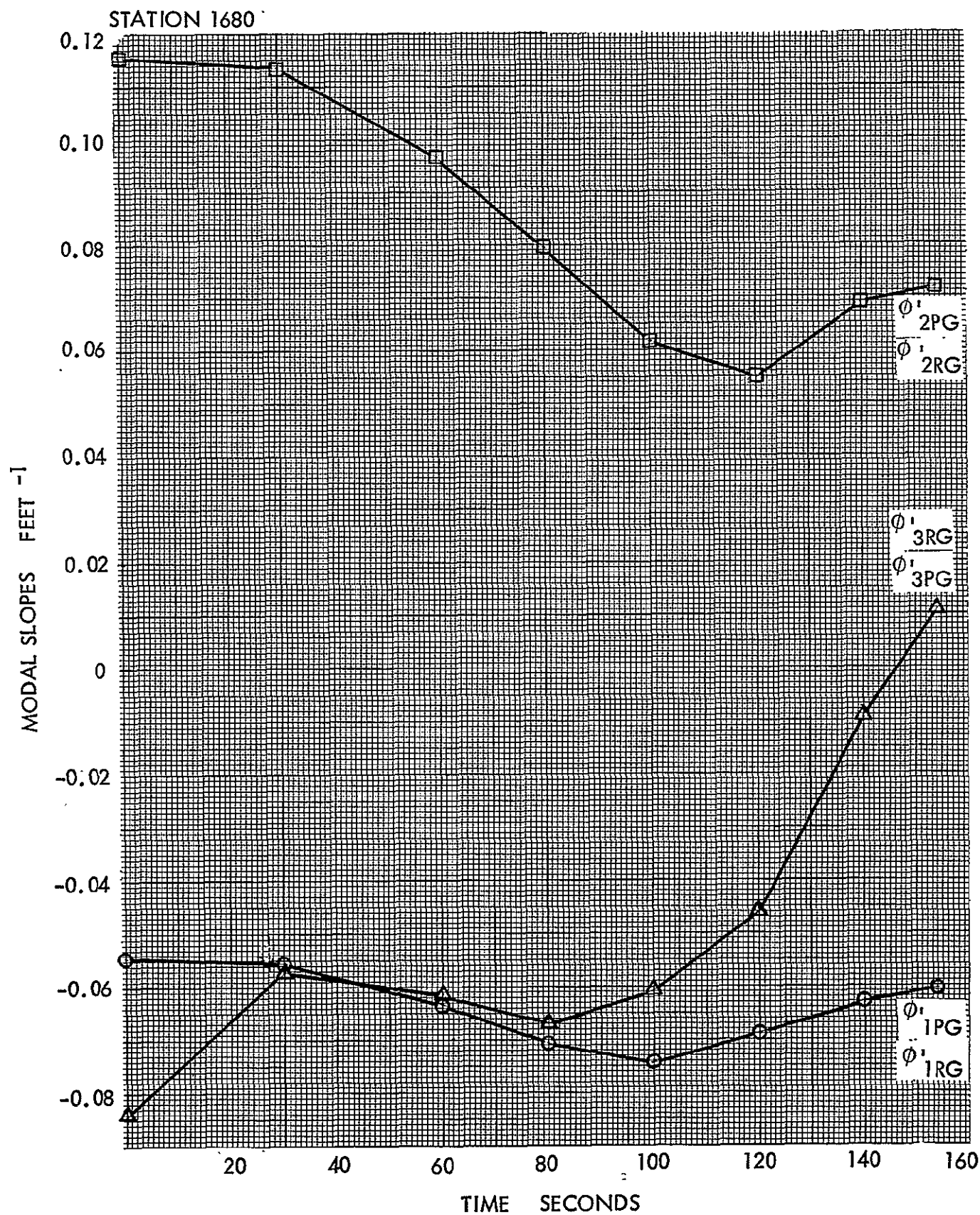
STATION 100

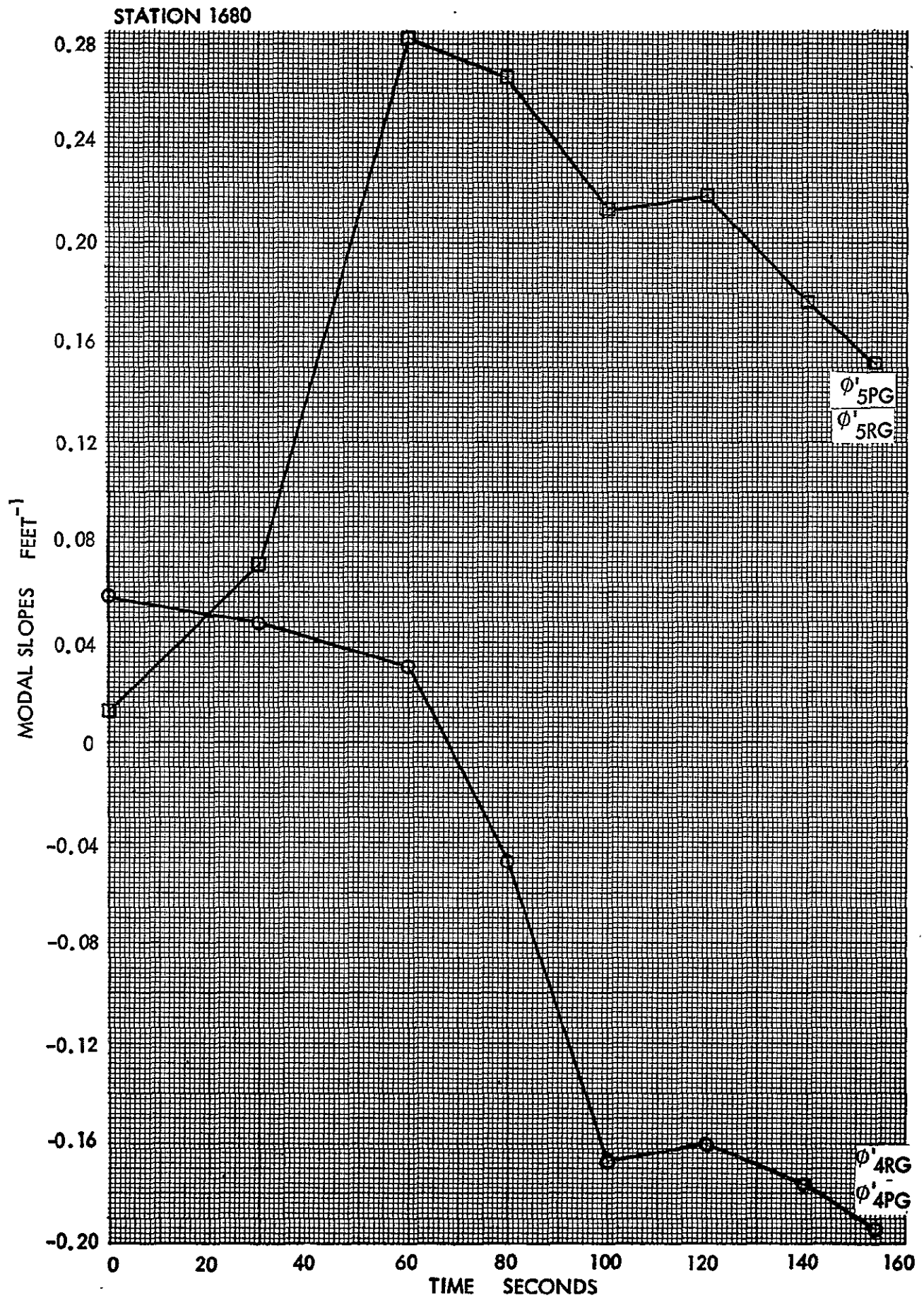


SATURN IB/CENTAUR, MODAL SLOPES AT THE ENGINE GIMBAL
(ϕ'_{4T} , ϕ'_{5T}) VERSUS TIME
STATION 100

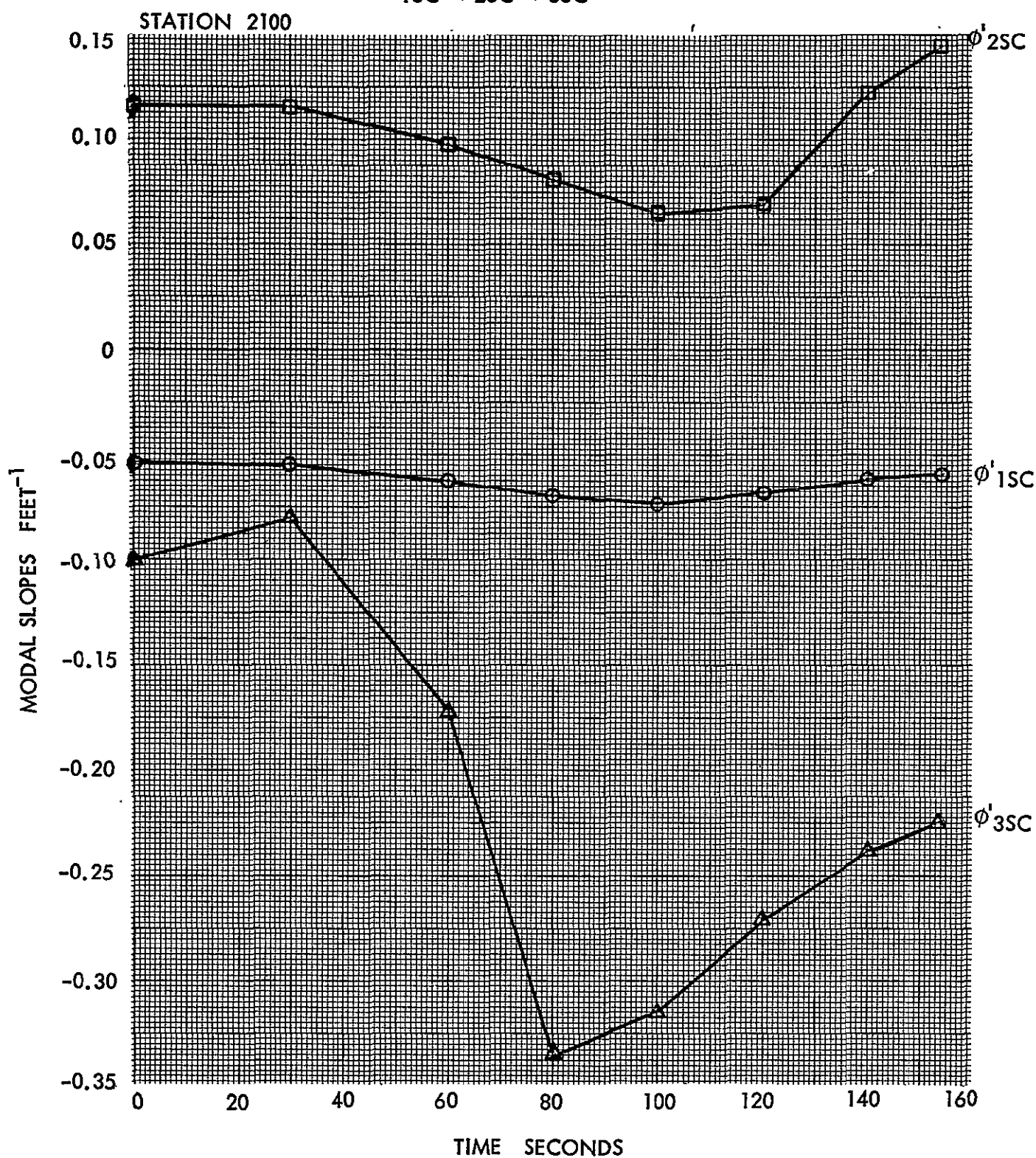


SATURN IB/CENTAUR, MODAL SLOPES AT THE INSTRUMENT UNIT

($\phi'_{1RG}, \phi'_{2RG}, \phi'_{3RG}$ AND $\phi'_{1PG}, \phi'_{2PG}, \phi'_{3PG}$) VERSUS TIME



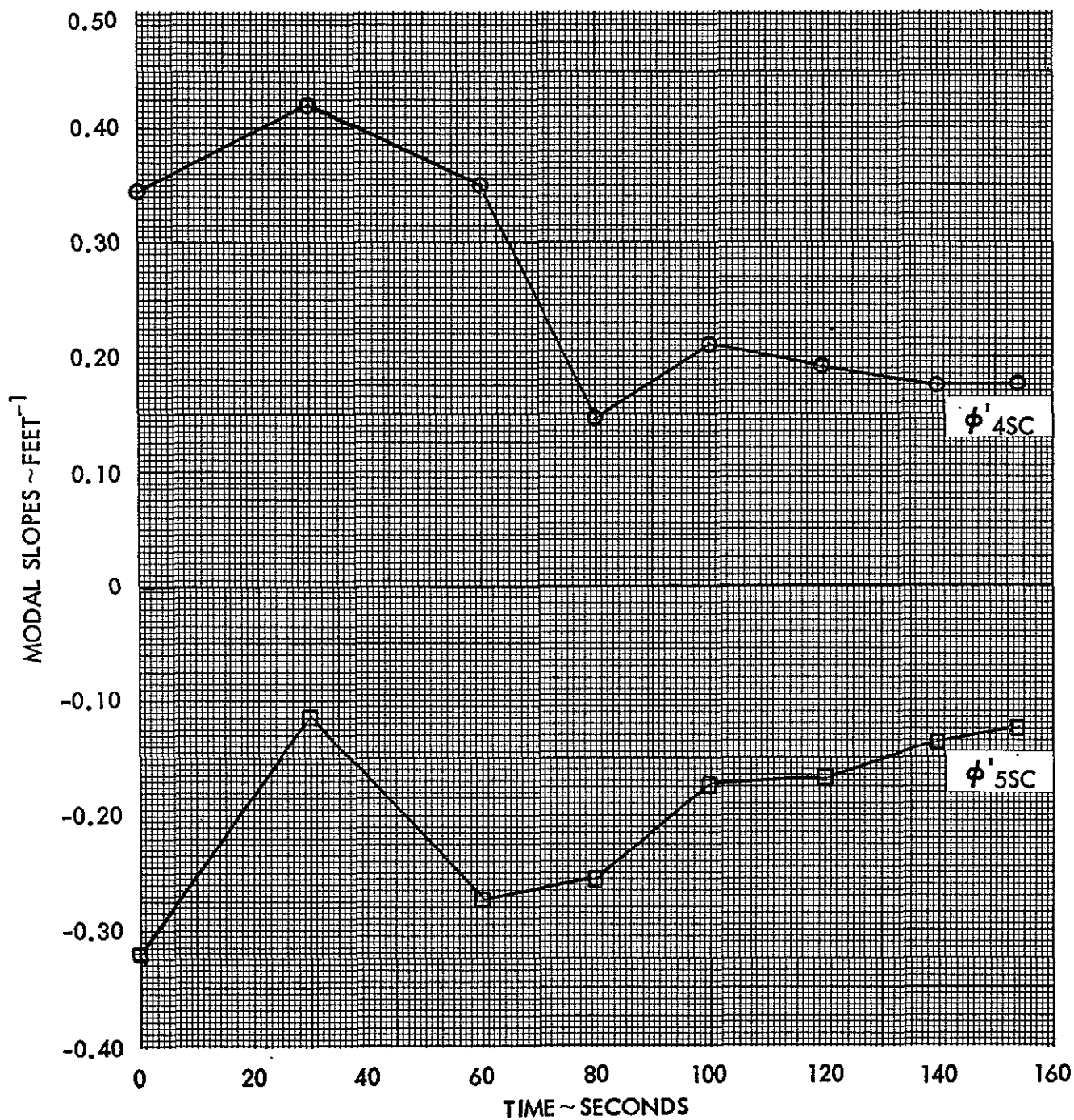
SATURN IB/CENTAUR, MODAL SLOPES AT SPACECRAFT
(ϕ'_{1SC} , ϕ'_{2SC} , ϕ'_{3SC}) VERSUS TIME



SATURN IB/CENTAUR, MODAL SLOPES AT SPACECRAFT

 $(\phi'_{4SC}, \phi'_{5SC})$ VERSUS TIME

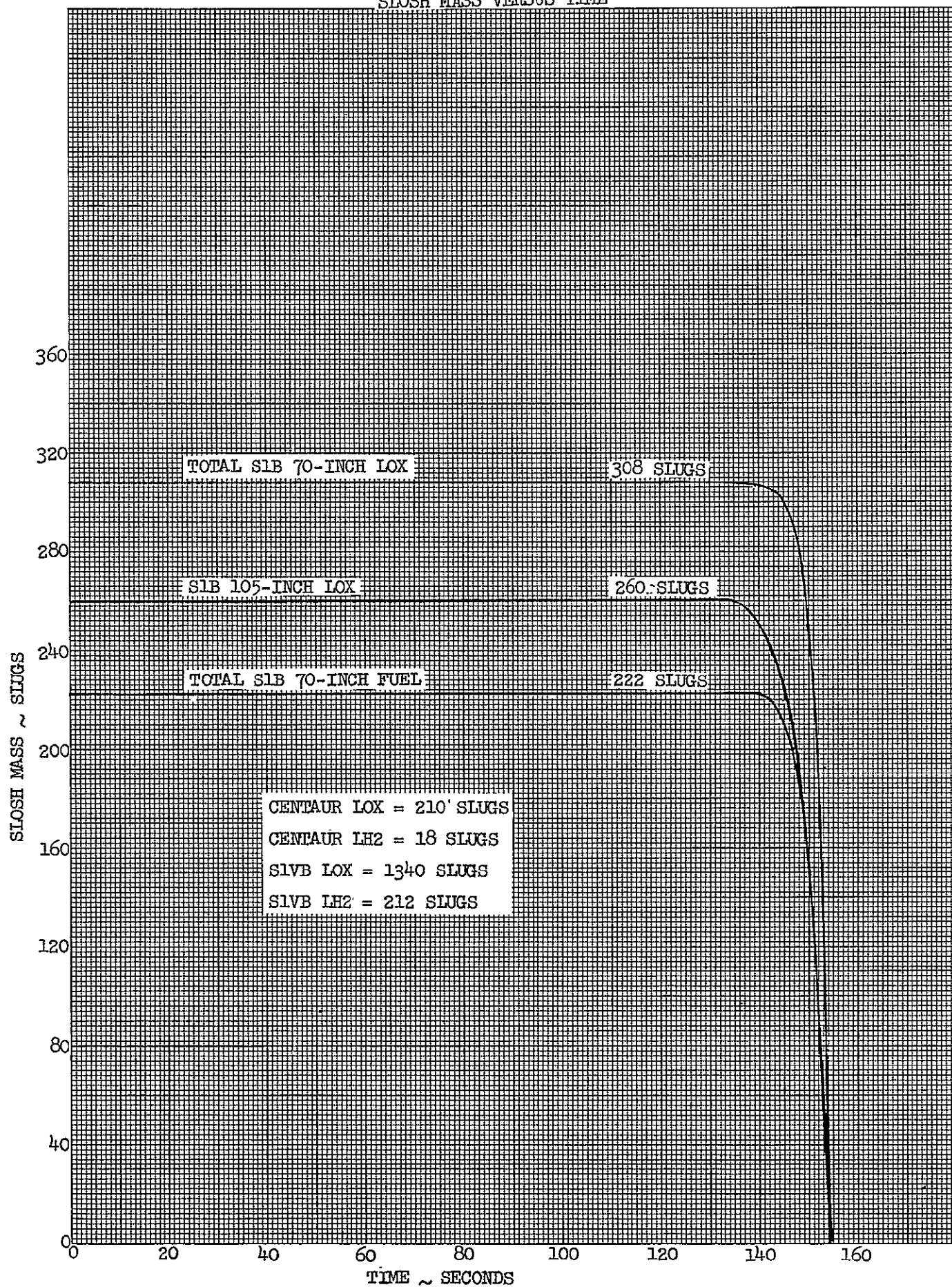
STATION 2100

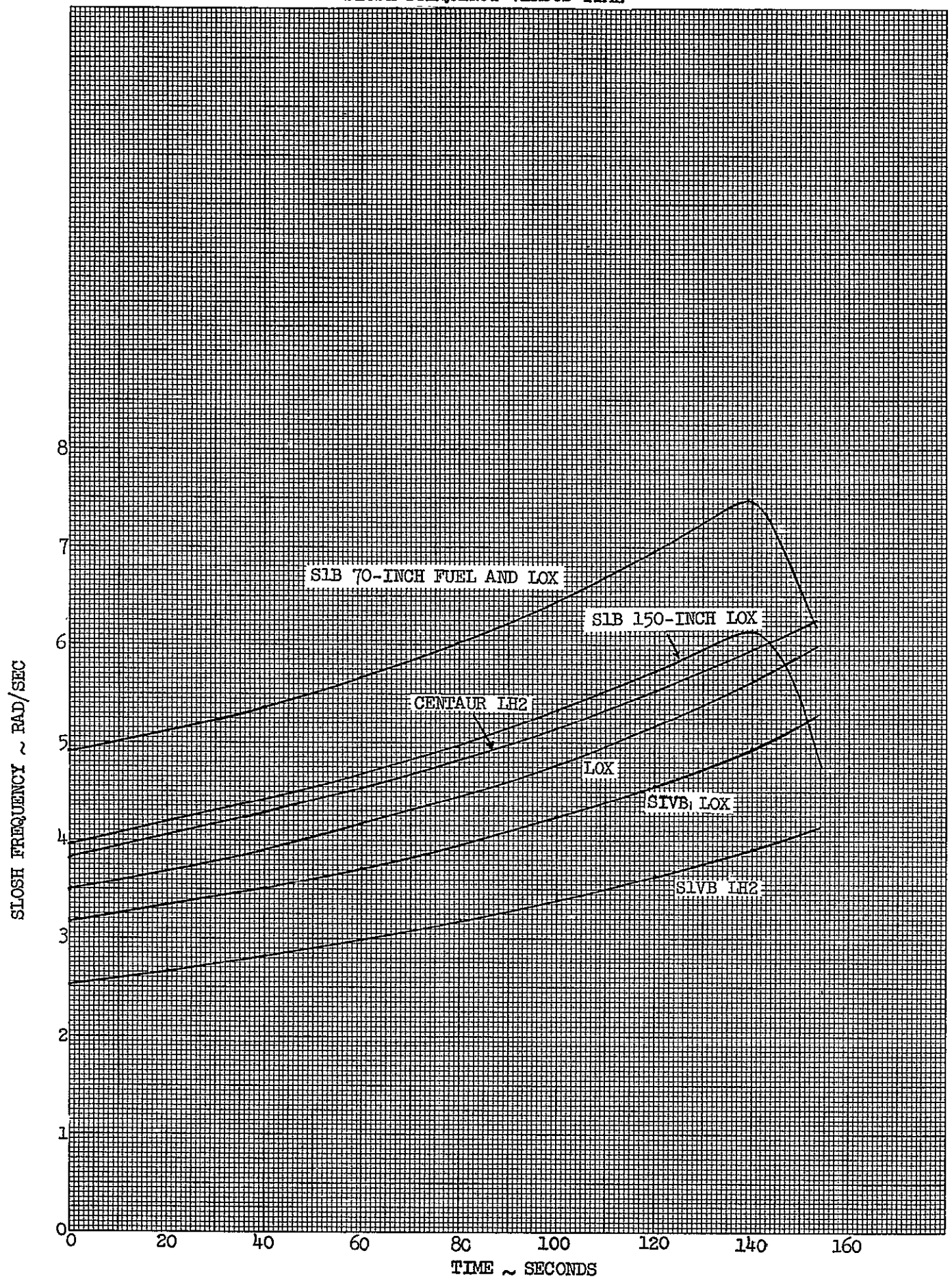


PROPELLANT
SLOSH

SATURN 1B/CENTAUR,
SLOSH MASS VERSUS TIME

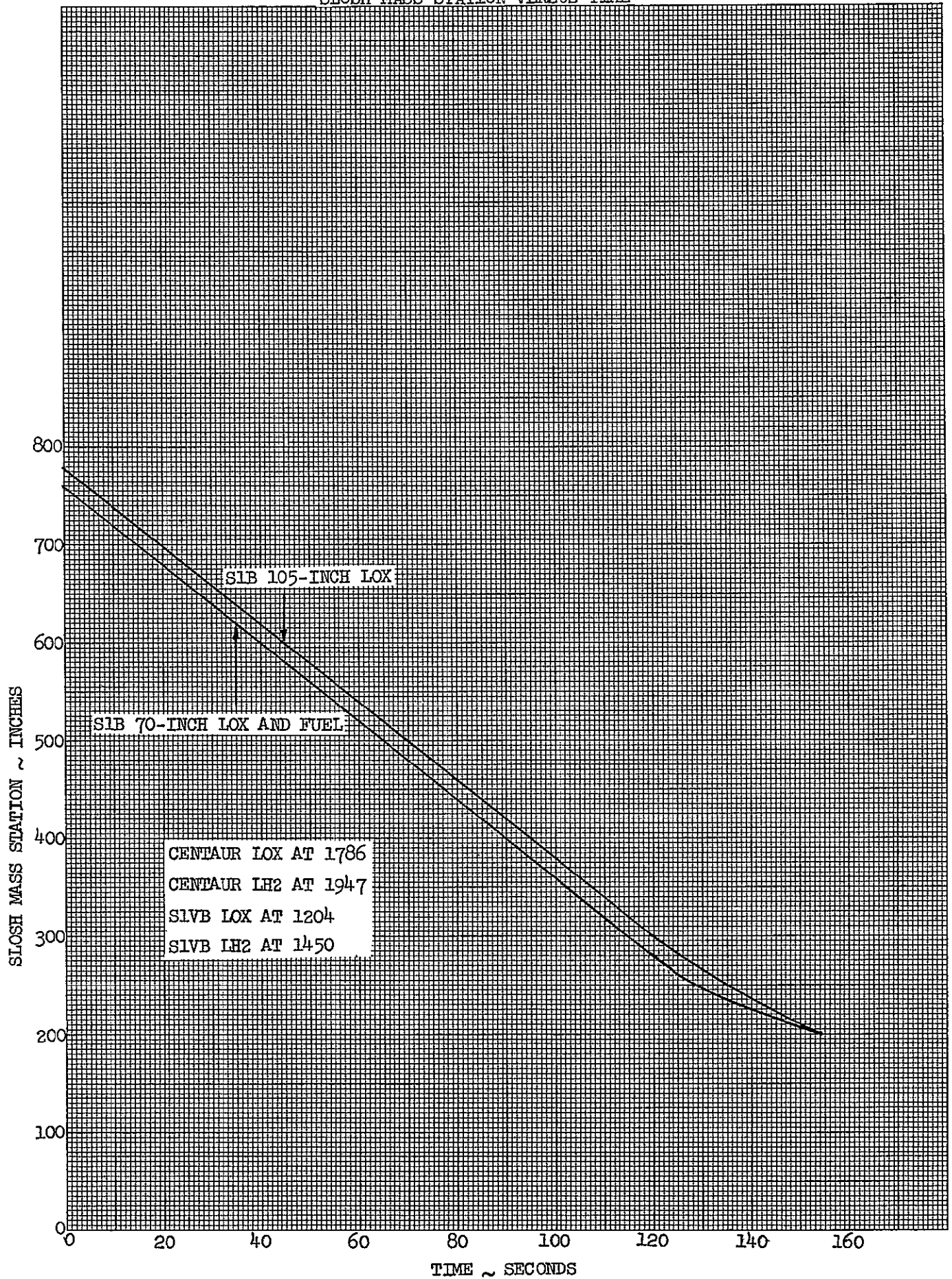
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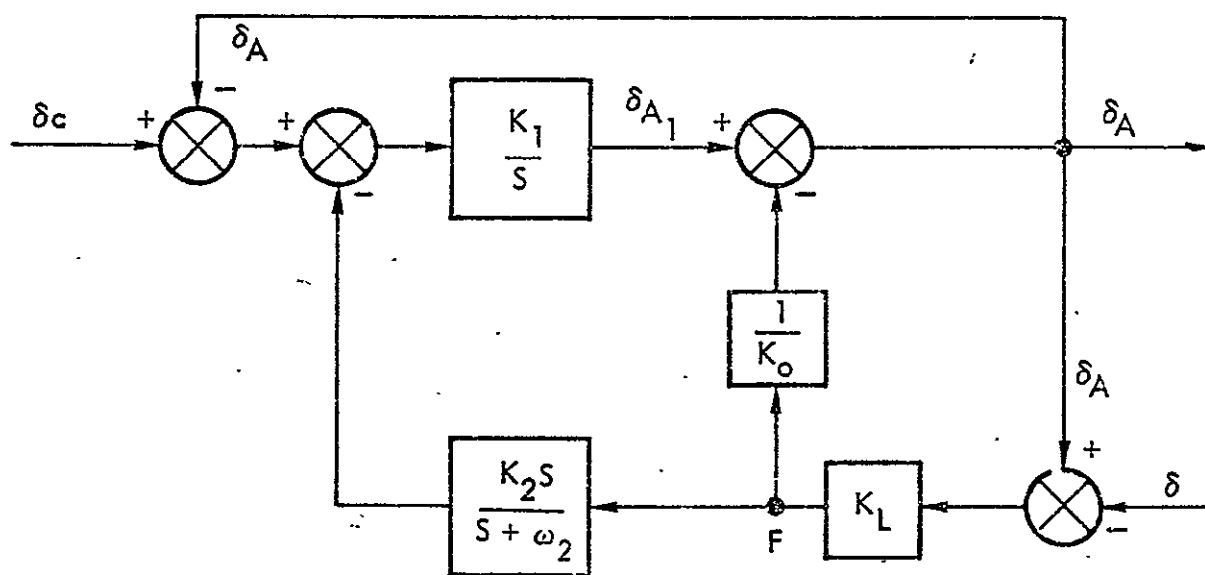
SATURN 1B/CENTAUR,
SLOSH MASS STATION VERSUS TIME

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5. THRUST VECTOR CONTROL DATA

The linearized TVC Model for the Saturn IB control system is given in Figure D-10 and the associated data for the S-I and S-IVB stages in Table D-4. Table D-5 gives the corresponding TVC transfer functions.



Note: δ is derived from an actuator moment equation.

Figure D-10. Linearized Block Diagram of Saturn 1B Thrust Vector Control System

Table D-4
Parameters for S-IB and S-IVB Stages.

Parameter		S-I (H-1 Engines) *	S-IVB (J-2 Engine)
I_n	(slug-ft ²)	1015.0	2660
d	(in.)	27.5	11.625
M_L	$\frac{\text{lb-sec}^2}{\text{in}}$	16.1	117.0
l_n	(ft)	2.657	2.425
K_1	(1/sec)	17.142	18.76
K_2	(in/lb)	0.704437×10^{-5}	0.6573×10^{-5}
K_O	(lb/in)	4.35×10^5	12.889×10^5
K_L	(lb/in)	0.668×10^5	3.9101×10^5
B	(lb-sec/in)	116.0	538
ω_2	(rad/sec)	20.0	12.0

*H-1 Engine data is only for one engine.

Table D-5
Thrust Vector Control System Transfer Function

TVC System	$\frac{\delta}{\delta_c}(s)$	Approximated $\frac{\delta}{\delta_c}(s)$
S-I	$\left(\frac{s}{20} + 1\right)$	$\left(\frac{s}{20} + 1\right)$
	$\left(\frac{s}{20.674} + 1\right)\left(\frac{s}{16.770} + 1\right)\left(\frac{s}{5.8073 \pm j 127.45} + 1\right)$	$\left(\frac{s}{20.674} + 1\right)\left(\frac{s}{16.770} + 1\right)$
S-IVB	$\left(\frac{s}{12} + 1\right)$	$\left(\frac{s}{12} + 1\right)$
	$\left(\frac{s}{10.285} + 1\right)\left(\frac{s}{35.583} + 1\right)\left(\frac{s}{9.050 \pm j 38.671} + 1\right)$	$\left(\frac{s}{10.285} + 1\right)\left(\frac{s}{35.583} + 1\right)$

Note: The effect of engine reaction is neglected.

S-IB actuator limit $\pm 8^\circ$
actuation rate limit $\pm 24^\circ/\text{sec}$

S-IVB actuator limit $\pm 7^\circ$
actuation rate limit $\pm 8^\circ/\text{sec}$

Saturn IB/Centaur

Bending Mode Data

<u>Parameter</u>	<u>Printout</u>
Bending mode frequency	OMEGA (rad/sec)
Bending Modal Mass	Total Mass (1/12 slugs)
Bending Mode Deflection	Y/Q EQ PHI (non dimensional)
Bending Mode Slope	PHI PR (inch ⁻¹)

Primary Stations:

Engine Gimbal	100 inches
Saturn Instrument Unit	1680 inches
Spacecraft Sensors	2100 inches

Saturn 1B/Centaur

t = 0

Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.08479011E+01	1.17676957E+02	3.29435881E+03	3.29435881E+03	3.29435881E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-6.68817021E-03	2.99687551E+00	-6.68817021E-03
5.00000000E+01	1.05716001E+05	6.21788309E+03	-6.68763564E-03	2.66216810E+00	-6.70556073E-03
1.00000000E+02	7.92014476E+05	2.21468127E+04	-6.68001923E-03	2.32593068E+00	-6.74444389E-03
1.50000000E+02	2.24204031E+06	3.47062066E+04	-6.65072302E-03	1.98830220E+00	-6.75260697E-03
2.00000000E+02	4.16219033E+06	4.14436489E+04	-6.58722809E-03	1.65152964E+00	-6.71001463E-03
2.50000000E+02	6.38960754E+06	4.78048007E+04	-6.48224174E-03	1.31707667E+00	-6.62519548E-03
3.00000000E+02	9.18828944E+06	6.58195843E+04	-6.32792835E-03	9.89079734E-01	-6.52660560E-03
3.50000000E+02	1.29559308E+07	8.37219107E+04	-6.10797781E-03	6.66439068E-01	-6.36309494E-03
4.00000000E+02	1.74457948E+07	9.47470476E+04	-5.80487899E-03	3.54494880E-01	-6.09636176E-03
4.50000000E+02	2.23236769E+07	9.92783176E+04	-5.40756142E-03	5.86975620E-02	-5.71594290E-03
5.00000000E+02	2.72684508E+07	9.75036675E+04	-4.91149167E-03	-2.15125408E-01	-5.21732319E-03
5.50000000E+02	3.19780491E+07	8.99738655E+04	-4.31839846E-03	-4.61109355E-01	-4.60339964E-03
6.00000000E+02	3.61811423E+07	7.73665341E+04	-3.63575509E-03	-6.73691941E-01	-3.88326625E-03
6.50000000E+02	3.96432585E+07	6.04761624E+04	-2.87610260E-03	-8.47906448E-01	-3.07152775E-03
7.00000000E+02	4.21722487E+07	4.01980429E+04	-2.05625665E-03	-9.79637281E-01	-2.18747659E-03
7.50000000E+02	4.36228156E+07	1.75070368E+04	-1.19641401E-03	-1.06583125E+00	-1.25415062E-03
8.00000000E+02	4.38998730E+07	-6.56778892E+03	-3.19179778E-04	-1.10465922E+00	-2.97294731E-04
8.50000000E+02	4.29605572E+07	-3.09715118E+04	5.51459267E-04	-1.09562404E+00	6.55745562E-04
9.00000000E+02	4.09698824E+07	-4.33322909E+04	1.39179498E-03	-1.04013402E+00	1.53925046E-03
9.50000000E+02	3.88644011E+07	-4.44498185E+04	2.15829008E-03	-9.47568644E-01	2.31110519E-03
9.62000000E+02	3.82394653E+07	-4.48300645E+04	2.37418339E-03	-9.13685529E-01	2.52876981E-03
1.00000000E+03	3.65176086E+07	-4.56225591E+04	2.49146862E-03	-8.14902268E-01	2.67290704E-03
1.05000000E+03	3.42225859E+07	-4.62925188E+04	2.66710893E-03	-6.75860815E-01	2.89773592E-03
1.10000000E+03	3.18830839E+07	-4.71460794E+04	2.88018412E-03	-5.23937440E-01	3.19449132E-03
1.15000000E+03	2.95213051E+07	-4.73145557E+04	3.11103297E-03	-3.58337829E-01	3.42646334E-03
1.15500000E+03	2.92843292E+07	-4.74744953E+04	3.13314040E-03	-3.41147482E-01	3.44963704E-03
1.16000000E+03	2.77927841E+07	-4.92053813E+04	3.26130818E-03	-2.32380994E-01	3.52728321E-03
1.20000000E+03	2.70952026E+07	-5.04013487E+04	3.30788217E-03	-1.82624570E-01	3.58032189E-03
1.25000000E+03	2.44920966E+07	-5.29074479E+04	3.47436119E-03	1.87648048E-03	3.77668946E-03
1.28000000E+03	2.29122581E+07	-5.21791949E+04	3.56610450E-03	1.16526399E-01	3.86427133E-03
1.30000000E+03	2.18749044E+07	-5.15003092E+04	3.60916690E-03	1.92892897E-01	3.83805717E-03

1.35000000E+03	1.93175366E+07	-5.07055220E+04	3.70817128E-03	3.87243667E-01	3.93352915E-03
1.40000000E+03	1.68133445E+07	-4.93712678E+04	3.79499763E-03	5.86002803E-01	4.01442549E-03
1.45000000E+03	1.43895871E+07	-4.74864456E+04	3.86996692E-03	7.88447732E-01	4.08101779E-03
1.50000000E+03	1.20740295E+07	-4.50419150E+04	3.93353242E-03	9.93872975E-01	4.13371871E-03
1.55000000E+03	9.89484795E+06	-4.20297817E+04	3.99784047E-03	1.20400856E+00	4.41813829E-03
1.60000000E+03	7.86816316E+06	-3.96967409E+04	4.09122131E-03	1.42659066E+00	4.48818871E-03
1.65000000E+03	5.91296130E+06	-3.83100844E+04	4.16369295E-03	1.65260132E+00	4.54679380E-03
1.68000000E+03	4.79432217E+06	-3.58324010E+04	4.19746644E-03	1.78922275E+00	4.55579045E-03
1.70000000E+03	4.10732390E+06	-3.26532340E+04	4.21618443E-03	1.88023425E+00	4.54271677E-03
1.74400000E+03	2.90592931E+06	-2.10216842E+04	4.27713917E-03	2.08709950E+00	4.62419200E-03
1.75000000E+03	2.78483473E+06	-1.93767605E+04	4.28396615E-03	2.11478138E+00	4.60345107E-03
1.80000000E+03	2.05549772E+06	-1.16674338E+04	4.33172340E-03	2.34220081E+00	4.52205674E-03
1.85000000E+03	1.52095449E+06	-9.68363774E+03	4.36732262E-03	2.56839714E+00	4.52363961E-03
1.90000000E+03	1.09015905E+06	-7.51755250E+03	4.39325323E-03	2.79436665E+00	4.51334193E-03
1.95000000E+03	7.72237483E+05	-5.16898649E+03	4.41168148E-03	3.01957056E+00	4.49340459E-03
2.00000000E+03	5.29118253E+05	-4.54835973E+03	4.42464332E-03	3.24432353E+00	4.49582266E-03
2.05000000E+03	3.18143883E+05	-3.88319235E+03	4.43306051E-03	3.46906910E+00	4.49321841E-03
2.08000000E+03	2.07915131E+05	-3.46272106E+03	4.43620425E-03	3.60381398E+00	4.48952610E-03
2.10000000E+03	1.61312090E+05	-2.18471424E+03	4.43767728E-03	3.69326965E+00	4.47118517E-03
2.12000000E+03	1.20503871E+05	-1.88842677E+03	4.43880086E-03	3.78265866E+00	4.46764942E-03
2.20000000E+03	2.82014770E+04	-5.17218877E+02	4.44091325E-03	4.13926892E+00	4.44869098E-03
2.25000000E+03	7.96043460E+03	-2.90441689E+02	4.44168697E-03	4.36207170E+00	4.45620906E-03
2.30000000E+03	4.72823585E-30	-4.45010046E-10	4.44190423E-03	4.58474347E+00	4.44190423E-03

Saturn 1B/Centaur

t = 0
Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ OM	ACCELERATION
2.74429501E+01	7.53115509E+02	3.29435881E+03	3.29435881E+03	3.29435881E+03	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PP. 1/IN
0.	0.	0.		-8.45508895E-03	2.66840237E+00	-8.45508895E-03	
5.00000000E+01	5.87400363E+05	3.42282301E+04		-8.45210330E-03	2.24398740E+00	-8.55077743E-03	
1.00000000E+02	4.27241933E+06	1.16883859E+05		-8.41057520E-03	1.81143422E+00	-8.75058812E-03	
1.50000000E+02	1.17702728E+07	1.76433372E+05		-8.25509176E-03	1.37224846E+00	-8.77303166E-03	
2.00000000E+02	2.13692707E+07	2.03957948E+05		-7.92592779E-03	9.38610031E-01	-8.53020111E-03	
2.50000000E+02	3.20785885E+07	2.23732527E+05		-7.30310879E-03	5.22862795E-01	-8.06215041E-03	
3.00000000E+02	4.40840687E+07	2.54228898E+05		-6.63400505E-03	1.35111480E-01	-7.40139820E-03	
3.50000000E+02	5.68491536E+07	2.48374954E+05		-5.62417723E-03	-2.11122657E-01	-6.38102457E-03	
4.00000000E+02	6.81870712E+07	1.98545217E+05		-4.36965203E-03	-4.96623202E-01	-4.98046270E-03	
4.50000000E+02	7.60885957E+07	1.12624773E+05		-2.91972241E-03	-7.03932043E-01	-3.26956106E-03	
5.00000000E+02	7.90652058E+07	3.69166386E+03		-1.35909245E-03	-8.20429141E-01	-1.37067178E-03	
5.50000000E+02	7.62964116E+07	-1.14911594E+05		2.04421553E-04	-8.40322503E-01	5.68415584E-04	
6.00000000E+02	6.76403588E+07	-2.29565356E+05		1.65335714E-03	-7.65585705E-01	2.38778306E-03	
6.50000000E+02	5.36197684E+07	-3.27493802E+05		2.87413024E-03	-6.06135701E-01	3.93240716E-03	
7.00000000E+02	3.53521866E+07	-3.97851726E+05		3.76972094E-03	-3.79175731E-01	5.06844290E-03	
7.50000000E+02	1.44291581E+07	-4.32662810E+05		4.27043946E-03	-1.07771392E-01	5.69732196E-03	
8.00000000E+02	-7.24569811E+06	-4.27510470E+05		4.34184468E-03	1.81195175E-01	5.76638598E-03	
8.50000000E+02	-2.76453513E+07	-3.81906617E+05		3.99912972E-03	4.59495825E-01	5.27507359E-03	
9.00000000E+02	-4.53868506E+07	-3.43022256E+05		3.25545204E-03	7.02129664E-01	4.42272268E-03	
9.48000000E+02	-6.17268214E+07	-3.37218397E+05		2.22671614E-03	8.90844415E-01	3.38604749E-03	
9.62000000E+02	-6.64315332E+07	-3.34828237E+05		1.86785714E-03	9.35735903E-01	3.02243727E-03	
1.00000000E+03	-7.90263875E+07	-3.29139795E+05		1.63900269E-03	1.04918725E+00	2.94797363E-03	
1.05000000E+03	-9.53531976E+07	-3.22489151E+05		1.20385193E-03	1.19350333E+00	2.81047658E-03	
1.10000000E+03	-1.11163820E+08	-3.11295641E+05		5.34251431E-04	1.32891925E+00	2.60955570E-03	
1.15000000E+03	-1.26645149E+08	-3.07913534E+05		-3.59873249E-04	1.43697257E+00	1.69288365E-03	
1.15500000E+03	-1.28174182E+08	-3.03695985E+05		-4.55671311E-04	1.44512775E+00	1.56896859E-03	
1.18600000E+03	-1.36951904E+08	-2.43313651E+05		-1.05048163E-03	1.47817932E+00	2.64727294E-04	
1.20000000E+03	-1.39976577E+08	-1.88782434E+05		-1.28555917E-03	1.47818260E+00	-2.65113579E-04	
1.25000000E+03	-1.42972002E+08	6.78164244E+04		-2.20530350E-03	1.40810827E+00	-2.59282593E-03	
1.28000000E+03	-1.39302744E+08	1.75544743E+05		-2.75268397E-03	1.31273577E+00	-3.75579679E-03	
1.30000000E+03	-1.35429849E+08	2.11394056E+05		-3.01696476E-03	1.23781401E+00	-3.95649390E-03	

1.35000000E+05	-1.24247047E+08	2.31285881E+05	-3.64182708E-03	1.02186526E+00	-4.66976433E-03
1.40000000E+05	-1.12369542E+08	2.47083125E+05	-4.21117394E-03	7.72066889E-01	-5.30932116E-03
1.45000000E+05	-9.97103703E+07	2.58224726E+05	-4.72121915E-03	4.92267211E-01	-5.86888460E-03
1.50000000E+05	-8.60328696E+07	2.64219752E+05	-5.16929430E-03	1.86593415E-01	-6.34360431E-03
1.55000000E+05	-7.33872465E+07	2.64625300E+05	-5.63941565E-03	-1.55766742E-01	-8.28566864E-03
1.60000000E+05	-6.02580994E+07	2.61086576E+05	-6.34263824E-03	-5.87185178E-01	-8.95350400E-03
1.65000000E+05	-4.72991020E+07	2.56264711E+05	-6.90852036E-03	-1.04862267E+00	-9.47116747E-03
1.68000000E+05	-3.97448023E+07	2.45140320E+05	-7.18322207E-03	-1.33566104E+00	-9.63462527E-03
1.70000000E+05	-3.49881033E+07	2.29219145E+05	-7.34044334E-03	-1.52849737E+00	-9.63263479E-03
1.74400000E+05	-2.82157566E+07	1.62415563E+05	-7.87466914E-03	-2.00935048E+00	-1.05560329E-02
1.75000000E+05	-2.52723173E+07	1.52190653E+05	-7.93644259E-03	-2.07235103E+00	-1.04457691E-02
1.80000000E+05	-1.92190540E+07	1.01433522E+05	-8.37707452E-03	-2.58000260E+00	-1.00317812E-02
1.85000000E+05	-1.45025439E+07	8.67923376E+04	-8.71307042E-03	-3.08419621E+00	-1.01140767E-02
1.90000000E+05	-1.05833727E+07	6.95391409E+04	-8.96249180E-03	-3.58935792E+00	-1.00733407E-02
1.95000000E+05	-7.59201059E+06	4.96840629E+04	-9.14259100E-03	-4.08978694E+00	-9.92810978E-03
2.00000000E+05	-5.24272700E+06	4.41821228E+04	-9.27047988E-03	-4.58726647E+00	-9.96190591E-03
2.05000000E+05	-3.18432375E+06	3.80487736E+04	-9.35423928E-03	-5.08511020E+00	-9.94368581E-03
2.08000000E+05	-2.10203512E+06	3.40660289E+04	-9.38583795E-03	-5.38296097E+00	-9.91041493E-03
2.10000000E+05	-1.63735193E+06	2.18334749E+04	-9.40075824E-03	-5.57797470E+00	-9.73562748E-03
2.12000000E+05	-1.22930736E+06	1.89545491E+04	-9.41218649E-03	-5.77235579E+00	-9.70174575E-03
2.20000000E+05	-2.92425991E+05	5.33374804E+03	-9.43386853E-03	-6.54061795E+00	-9.51407527E-03
2.25000000E+05	-8.29332092E+04	3.01867427E+03	-9.44190860E-03	-7.02015096E+00	-9.59284232E-03
2.30000000E+05	8.62207307E-27	2.85319650E-10	-9.44417505E-03	-7.49836922E+00	-9.44417505E-03

Saturn 1B/Centaur

t = 0
Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.19468444E+01	1.75953775E+03	3.29435881E+03	3.29435881E+03	3.29435881E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.30372590E-02	3.47105952E+00	-1.30372590E-02
5.00000000E+01	1.75638475E+06	1.01706851E+05	-1.30283012E-02	2.81423200E+00	-1.33215047E-02
1.00000000E+02	1.25147751E+07	3.36885413E+05	-1.29057257E-02	2.13380677E+00	-1.38857189E-02
1.50000000E+02	3.37798218E+07	4.93463959E+05	-1.24557572E-02	1.43583219E+00	-1.39043758E-02
2.00000000E+02	6.02493020E+07	5.54833682E+05	-1.15204270E-02	7.56149412E-01	-1.31642520E-02
2.50000000E+02	8.87904789E+07	5.81810509E+05	-1.00323160E-02	1.29994631E-01	-1.17721410E-02
3.00000000E+02	1.17460713E+08	5.37412977E+05	-7.96637075E-03	-4.08504515E-01	-9.58855865E-03
3.50000000E+02	1.39831486E+08	3.35637638E+05	-5.37657819E-03	-8.11771062E-01	-6.39933210E-03
4.00000000E+02	1.49307085E+08	3.12003460E+04	-2.45975653E-03	-1.03744738E+00	-2.55574225E-03
4.50000000E+02	1.42083450E+08	-3.21595884E+05	4.83618315E-04	-1.06387466E+00	1.48256969E-03
5.00000000E+02	1.17550734E+08	-6.50410574E+05	3.10742353E-03	-8.95433384E-01	5.14751147E-03
5.50000000E+02	7.84480853E+07	-8.95399841E+05	5.08787321E-03	-5.64000887E-01	7.92414139E-03
6.00000000E+02	3.01758921E+07	-1.01122972E+06	6.18378828E-03	-1.24496381E-01	9.41891630E-03
6.50000000E+02	-2.01007871E+07	-9.73485407E+05	6.28139078E-03	3.52979001E-01	9.42715149E-03
7.00000000E+02	-6.45959483E+07	-7.82000460E+05	5.41843806E-03	7.93676709E-01	7.97115080E-03
7.50000000E+02	-9.61217154E+07	-4.60484283E+05	3.78441988E-03	1.12977389E+00	5.30305506E-03
8.00000000E+02	-1.09194032E+08	-5.24015763E+04	1.69719490E-03	1.31118254E+00	1.87180632E-03
8.50000000E+02	-1.00848713E+08	3.86357212E+05	-4.39858188E-04	1.31390250E+00	-1.74078797E-03
9.00000000E+02	-7.36998295E+07	6.04554679E+05	-2.20347569E-03	1.15358075E+00	-4.26071517E-03
9.48000000E+02	-4.42751582E+07	6.21919879E+05	-3.33737418E-03	9.17695444E-01	-5.47548770E-03
9.62000000E+02	-3.55307238E+07	6.27284966E+05	-3.56086572E-03	8.39242652E-01	-5.72391732E-03
1.00000000E+03	-1.14547336E+07	6.37454111E+05	-3.63381491E-03	6.13237083E-01	-6.16893500E-03
1.05000000E+03	2.05499193E+07	6.43222778E+05	-3.60829854E-03	2.89314962E-01	-6.81280191E-03
1.10000000E+03	5.28155490E+07	6.46085205E+05	-3.36635987E-03	-7.15305609E-02	-7.67359457E-03
1.15000000E+03	8.50916680E+07	6.44606563E+05	-2.84786530E-03	-4.43071515E-01	-7.14524239E-03
1.15500000E+03	8.83069240E+07	6.41455370E+05	-2.78267688E-03	-4.78583918E-01	-7.05904601E-03
1.18600000E+03	1.07606930E+08	5.82274568E+05	-2.34389827E-03	-6.82213827E-01	-5.49132836E-03
1.20000000E+03	1.15332246E+08	5.20290824E+05	-2.15461513E-03	-7.55477162E-01	-4.96699797E-03
1.25000000E+03	1.32801966E+08	1.64748038E+05	-1.34445942E-03	-9.43252480E-01	-2.28587678E-03
1.28000000E+03	1.35079566E+08	-1.43084984E+04	-8.24246984E-04	-9.88819910E-01	-7.42484136E-04
1.30000000E+03	1.34141598E+08	-7.95945444E+04	-5.65171421E-04	-9.98542334E-01	-2.11417891E-04

1.35000000E+03	1.29137633E+08	-1.20496100E+05	6.85311063E-05	-9.88618247E-01	6.04069330E-04
1.40000000E+03	1.22112583E+08	-1.60164434E+05	6.73293009E-04	-9.38709447E-01	1.38513494E-03
1.45000000E+03	1.13168460E+08	-1.97000210E+05	1.23961071E-03	-8.50955979E-01	2.11516720E-03
1.50000000E+03	1.02484766E+08	-2.29508582E+05	1.75865943E-03	-7.28302058E-01	2.77869757E-03
1.55000000E+03	9.03126617E+07	-2.56271707E+05	2.32740140E-03	-5.59794882E-01	4.89011847E-03
1.60000000E+03	7.70648279E+07	-2.69047958E+05	3.20891137E-03	-2.88326543E-01	5.89939095E-03
1.65000000E+03	6.35619518E+07	-2.70583233E+05	3.94912469E-03	2.62454396E-02	6.65495702E-03
1.68000000E+03	5.54731842E+07	-2.67489397E+05	4.32497938E-03	2.31372395E-01	6.99987335E-03
1.70000000E+03	5.01918230E+07	-2.59569211E+05	4.54737714E-03	3.72946567E-01	7.14306926E-03
1.74400000E+03	3.96978955E+07	-2.08732615E+05	5.33509707E-03	7.65140273E-01	8.78112188E-03
1.75000000E+03	3.84734347E+07	-1.99471718E+05	5.42889155E-03	8.17635765E-01	8.71779045E-03
1.80000000E+03	3.00340694E+07	-1.48244303E+05	6.10959562E-03	1.24524438E+00	8.52793662E-03
1.85000000E+03	2.30411933E+07	-1.30599153E+05	6.63887793E-03	1.67802752E+00	8.74701599E-03
1.90000000E+03	1.70621051E+07	-1.07681411E+05	7.03800110E-03	2.11647596E+00	8.75815143E-03
1.95000000E+03	1.23611275E+07	-7.94830838E+04	7.32988344E-03	2.55079268E+00	8.58653299E-03
2.00000000E+03	8.58655067E+06	-7.12869234E+04	7.53867722E-03	2.98219935E+00	8.65427852E-03
2.05000000E+03	5.25379329E+06	-6.18097421E+04	7.67629089E-03	3.41474991E+00	8.63383918E-03
2.08000000E+03	3.49286032E+06	-5.55092517E+04	7.72858179E-03	3.67307535E+00	8.58335931E-03
2.10000000E+03	2.72817451E+06	-3.59880399E+04	7.75340627E-03	3.83965764E+00	8.30537007E-03
2.12000000E+03	2.05457584E+06	-3.13391238E+04	7.77247529E-03	4.00523663E+00	8.25122756E-03
2.20000000E+03	4.94270983E+05	-8.98252282E+03	7.80887641E-03	4.65250574E+00	7.94395195E-03
2.25000000E+03	1.40611940E+05	-5.11016629E+03	7.82248526E-03	5.05618794E+00	8.07799357E-03
2.30000000E+03	2.29695451E-23	1.54522512E-04	7.82633133E-03	5.45769667E+00	7.82633130E-03

Seturn 1B/Centaur

t = 0
Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.02316346E+01	4.93248249E+03	3.29435881E+03	3.29435881E+03	3.29435881E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.13703758E-02	2.40757951E+00	-1.13703758E-02
5.00000000E+01	3.32206452E+06	1.90236615E+05	-1.13533316E-02	1.82967249E+00	-1.19017512E-02
1.00000000E+02	2.27825084E+07	5.93784486E+05	-1.11269137E-02	1.20964654E+00	-1.28542215E-02
1.50000000E+02	5.89890161E+07	8.14167034E+05	-1.03273771E-02	5.64430842E-01	-1.27174555E-02
2.00000000E+02	1.01234680E+08	8.56760918E+05	-8.72851322E-03	-4.00857395E-02	-1.12668686E-02
2.50000000E+02	1.43097239E+08	7.99252673E+05	-6.28047429E-03	-5.43402471E-01	-8.67053046E-03
3.00000000E+02	1.73218911E+08	2.98668554E+05	-3.07693637E-03	-8.70336813E-01	-3.97847120E-03
3.50000000E+02	1.67471318E+08	-5.35957562E+05	3.99805779E-04	-9.19255093E-01	2.03297389E-03
4.00000000E+02	1.21131594E+08	-1.28124482E+06	3.34818403E-03	-6.79708057E-01	7.28984542E-03
4.50000000E+02	4.45195549E+07	-1.71300466E+06	5.04080811E-03	-2.26692497E-01	1.03617977E-02
5.00000000E+02	-4.22874855E+07	-1.67700883E+06	5.06010686E-03	3.04042886E-01	1.03202389E-02
5.50000000E+02	-1.15331663E+08	-1.17519259E+06	3.44192594E-03	7.52876012E-01	7.16446553E-03
6.00000000E+02	-1.54358881E+08	-3.50200797E+05	6.7599742E+04	9.83214186E-01	1.79636279E-03
6.50000000E+02	-1.48989002E+08	5.55415259E+05	-2.43323978E-03	9.21443102E-01	-4.22803144E-03
7.00000000E+02	-1.02038831E+08	1.26951456E+06	-5.00325466E-03	5.79015415E-01	-9.14737751E-03
7.50000000E+02	-2.90022919E+07	1.56990759E+06	-6.33879538E-03	4.96713716E-02	-1.15162074E-02
8.00000000E+02	4.61841524E+07	1.34958072E+06	-6.14855343E-03	-5.18015661E-01	-1.06455976E-02
8.50000000E+02	9.78485693E+07	6.47713240E+05	-4.64953554E-03	-9.65246989E-01	-6.83049507E-03
9.00000000E+02	1.12575233E+08	1.46466403E+05	-2.50262889E-03	-1.19495055E+00	-3.00103951E-03
9.48000000E+02	1.18296690E+08	8.75231638E+04	-2.81730938E-04	-1.28177684E+00	-5.82628956E-04
9.62000000E+02	1.19370410E+08	6.55303801E+04	3.83880531E-04	-1.28476544E+00	1.57913703E-04
1.00000000E+03	1.20748004E+08	1.69248057E+04	7.61358075E-04	-1.26820070E+00	6.94049050E-04
1.05000000E+03	1.20634113E+08	-3.06010886E+04	1.36235517E-03	-1.21497210E+00	1.51480825E-03
1.10000000E+03	1.17135131E+08	-9.93279993E+04	2.13145431E-03	-1.10786702E+00	2.79364097E-03
1.15000000E+03	1.11746568E+08	-1.15777335E+05	2.99242746E-03	-9.43677349E-01	3.76427635E-03
1.15500000E+03	1.11122765E+08	-1.33681800E+05	3.07621853E-03	-9.24346858E-01	3.96743053E-03
1.18600000E+03	1.04520781E+08	-3.57675775E+05	3.56293054E-03	-7.79516628E-01	5.49631310E-03
1.20000000E+03	9.82411974E+07	-5.35988894E+05	3.73532333E-03	-6.94472762E-01	6.63256060E-03
1.25000000E+03	5.53183345E+07	-1.09892952E+06	4.24611078E-03	-2.48499679E-01	1.05257080E-02
1.28000000E+03	2.12538368E+07	-1.14406408E+06	4.39474841E-03	7.60967055E-02	1.09322574E-02
1.30000000E+03	-1.37119731E+06	-1.11266201E+06	4.41376561E-03	2.64809882E-01	9.35893012E-03

1.35000000E+03	-5.57973168E+07	-1.05555568E+06	4.27519668E-03	7.25018733E-01	8.96655526E-03
1.40000000E+03	-1.06069641E+08	-9.47120038E+05	3.88391988E-03	1.15343687E+00	8.09334227E-03
1.45000000E+03	-1.49735660E+08	-7.92353173E+05	3.26590103E-03	1.52712883E+00	6.78747069E-03
1.50000000E+03	-1.84656124E+08	-5.98730468E+05	2.45819349E-03	1.82613321E+00	5.11921779E-03
1.55000000E+03	-2.09118500E+08	-3.75551300E+05	1.27021236E-03	2.05546399E+00	5.02572536E-03
1.60000000E+03	-2.22658943E+08	-2.13521725E+05	-1.00982261E-03	2.19795897E+00	1.12539464E-03
1.65000000E+03	-2.31524483E+08	-1.31212594E+05	-3.40387605E-03	2.17666236E+00	-2.09175011E-03
1.68000000E+03	-2.33846427E+08	-3.80660578E+03	-4.87548417E-03	2.07572742E+00	-4.83741811E-03
1.70000000E+03	-2.32533361E+08	1.42391806E+05	-5.85836247E-03	1.95524852E+00	-7.28228053E-03
1.74000000E+03	-2.17286276E+08	5.53167297E+05	-9.84391503E-03	1.35614260E+00	-1.89763078E-02
1.75000000E+03	-2.13835335E+08	5.95799755E+05	-1.03613121E-02	1.23858734E+00	-2.01848859E-02
1.80000000E+03	-1.79670574E+08	7.16859124E+05	-1.43057083E-02	5.88174749E-02	-2.59999844E-02
1.85000000E+03	-1.44156049E+08	6.95953719E+05	-1.75422370E-02	-1.31666397E+00	-2.87763567E-02
1.90000000E+03	-1.10885264E+08	6.26532135E+05	-2.00868670E-02	-2.79447596E+00	-3.00953675E-02
1.95000000E+03	-8.23502001E+07	5.06352937E+05	-2.20092062E-02	-4.30282199E+00	-3.00147863E-02
2.00000000E+03	-5.80306612E+07	4.64323781E+05	-2.34095127E-02	-5.82288180E+00	-3.06759255E-02
2.05000000E+03	-3.61299364E+07	4.09577292E+05	-2.43465564E-02	-7.35964810E+00	-3.06916733E-02
2.08000000E+03	-2.44156856E+07	3.70611065E+05	-2.47086611E-02	-8.27676640E+00	-3.04156378E-02
2.10000000E+03	-1.91881654E+07	2.46963856E+05	-2.48826952E-02	-8.85308952E+00	-2.86704844E-02
2.12000000E+03	-1.45493562E+07	2.16601469E+05	-2.50172405E-02	-9.42315967E+00	-2.83261539E-02
2.20000000E+03	-3.58672008E+06	6.46727135E+04	-2.52775672E-02	-1.16036758E+01	-2.62500892E-02
2.25000000E+03	-1.02710805E+06	3.72049455E+04	-2.53766186E-02	-1.29634272E+01	-2.72368659E-02
2.30000000E+03	2.54912396E-22	2.61956248E-04	-2.54047641E-02	-1.43081626E+01	-2.54047642E-02

Saturn 1B/Centaur

t = 0
Mode 5

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.68609177E+01	5.90760067E+03	3.29435881E+03	3.29435881E+03	3.29435881E+03	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.		-1.22310084E-02	2.48528976E+00	-1.22310084E-02
5.00000000E+01	4.08337092E+06	2.33260817E+05		-1.22100313E-02	1.86220013E+00	-1.28824823E-02
1.00000000E+02	2.77609951E+07	7.17928524E+05		-1.19332002E-02	1.18802592E+00	-1.40216406E-02
1.50000000E+02	7.11535397E+07	9.67659220E+05		-1.09646209E-02	4.85117540E-01	-1.38052927E-02
2.00000000E+02	1.20910504E+08	9.99734422E+05		-9.04646712E-03	-1.66056747E-01	-1.20084151E-02
2.50000000E+02	1.09033336E+08	9.00336153E+05		-6.13883109E-03	-6.92933845E-01	-8.83116363E-03
3.00000000E+02	1.99733096E+08	1.85872774E+05		-2.39342789E-03	-1.00101661E+00	-2.95448722E-03
3.50000000E+02	1.81327486E+08	-9.15609076E+05		1.50938067E-03	-9.65626356E-01	4.29942163E-03
4.00000000E+02	1.11996267E+08	-1.79052741E+06		4.51583750E-03	-5.96811980E-01	1.00242717E-02
4.50000000E+02	1.09684864E+07	-2.14320310E+06		5.77498604E-03	-1.87381897E-02	1.24322717E-02
5.00000000E+02	-9.10182933E+07	-1.82577762E+06		4.94790237E-03	5.76165634E-01	1.06746649E-02
5.50000000E+02	-1.61903057E+08	-9.33189292E+05		2.34397026E-03	9.87708665E-01	5.29994029E-03
6.00000000E+02	-1.79520974E+08	2.44573148E+05		-1.16884683E-03	1.07448551E+00	-1.95128570E-03
6.50000000E+02	-1.39225821E+08	1.31643178E+06		-4.44601868E-03	8.01033143E-01	-8.69999038E-03
7.00000000E+02	-5.57964068E+07	1.91852678E+06		-6.44662340E-03	2.50683247E-01	-1.27093406E-02
7.50000000E+02	4.10615627E+07	1.83476137E+06		-6.58695509E-03	-4.01051384E-01	-1.26378308E-02
8.00000000E+02	1.16178644E+08	1.06899172E+06		-4.95047085E-03	-9.44679233E-01	-8.51254231E-03
8.50000000E+02	1.40208676E+08	-1.56610903E+05		-2.28405690E-03	-1.20786970E+00	-1.75672162E-03
9.00000000E+02	1.07574136E+08	-8.50844424E+05		2.51840024E-04	-1.14524135E+00	3.14717903E-03
9.48000000E+02	6.53609498E+07	-9.09917812E+05		1.91656979E-03	-9.45565677E-01	5.04479842E-03
9.62000000E+02	5.24918041E+07	-9.28557512E+05		2.24667928E-03	-8.72028938E-01	5.44860173E-03
1.00000000E+03	1.63670986E+07	-9.64321855E+05		2.35378026E-03	-6.50582448E-01	6.18883548E-03
1.05000000E+03	-3.23241303E+07	-9.85201584E+05		2.30994935E-03	-3.16573714E-01	7.21817385E-03
1.10000000E+03	-8.19726966E+07	-9.95903000E+05		1.93329498E-03	7.64995682E-02	8.57264832E-03
1.15000000E+03	-1.31664336E+08	-9.90456326E+05		1.12997727E-03	4.85915881E-01	7.73301945E-03
1.15500000E+03	-1.36587994E+08	-9.78860702E+05		1.02912690E-03	5.24139571E-01	7.55486491E-03
1.18600000E+03	-1.64799522E+08	-7.64301262E+05		3.52678822E-04	7.27500661E-01	4.48403699E-03
1.20000000E+03	-1.73987668E+08	-5.45762554E+05		6.47912699E-05	7.80106752E-01	3.01485913E-03
1.25000000E+03	-1.73570044E+08	5.59919014E+05		-1.08673609E-03	7.52160512E-01	-4.28627331E-03
1.28000000E+03	-1.50253350E+08	9.76395540E+05		-1.71751418E-03	5.76632884E-01	-7.29691726E-03
1.30000000E+03	-1.29546743E+08	1.08953057E+06		-1.98691424E-03	4.47493002E-01	-6.82927232E-03

1.35000000E+03	-7.39327547E+07	1.12676011E+06	-2.47679447E-03	8.76123085E-02	-7.48461716E-03
1.40000000E+03	-1.77271019E+07	1.11272888E+06	-2.69684975E-03	-2.92658274E-01	-7.64231142E-03
1.45000000E+03	3.64656683E+07	1.04635166E+06	-2.65047475E-03	-6.68284383E-01	-7.30092656E-03
1.50000000E+03	8.60726373E+07	9.29964468E+05	-2.35357853E-03	-1.01485545E+00	-6.48675394E-03
1.55000000E+03	1.28717853E+08	7.68544101E+05	-1.69127391E-03	-1.35293636E+00	-9.37671492E-03
1.60000000E+03	1.62775389E+08	6.31245747E+05	-1.50668913E-04	-1.74104330E+00	-6.46312638E-03
1.65000000E+03	1.92516079E+08	5.46178197E+05	1.72300752E-03	-2.00044816E+00	-3.73877446E-03
1.68000000E+03	2.07063575E+08	3.98894286E+05	2.98715953E-03	-2.07549963E+00	-1.00178333E-03
1.70000000E+03	2.13344192E+08	2.18498732E+05	3.87349254E-03	-2.06974255E+00	1.68850522E-03
1.74400000E+03	2.10786248E+08	-3.57272555E+05	7.64380443E-03	-1.77411044E+00	1.35421164E-02
1.75000000E+03	2.08433231E+08	-4.25377459E+05	-8.14694946E-03	-1.68791446E+00	1.51605926E-02
1.80000000E+03	1.79117588E+08	-6.63411798E+05	1.20415611E-02	-7.00114279E-01	2.28639396E-02
1.85000000E+03	1.45638939E+08	-6.67418043E+05	1.52894666E-02	5.29220139E-01	2.60629621E-02
1.90000000E+03	1.13254205E+08	-6.18826915E+05	1.78743520E-02	1.88108368E+00	2.77597660E-02
1.95000000E+03	8.46920551E+07	-5.14194099E+05	1.98450953E-02	3.28043644E+00	2.79746463E-02
2.00000000E+03	5.99151443E+07	-4.74527001E+05	2.12878620E-02	4.70058309E+00	2.87139497E-02
2.05000000E+03	3.74771242E+07	-4.20605770E+05	2.22572913E-02	6.14048672E+00	2.87732598E-02
2.08000000E+03	2.54344418E+07	-3.81384531E+05	2.26335840E-02	7.00022250E+00	2.85064594E-02
2.10000000E+03	2.00204631E+07	-2.56032967E+05	2.28150160E-02	7.53798610E+00	2.67419020E-02
2.12000000E+03	1.52068295E+07	-2.24978015E+05	2.29555112E-02	8.06944058E+00	2.63923889E-02
2.20000000E+03	3.77177090E+06	-6.78769136E+04	2.32282790E-02	1.00927856E+01	2.42489844E-02
2.25000000E+03	1.08185184E+06	-3.91563829E+04	2.33325181E-02	1.13549691E+01	2.52903372E-02
2.30000000E+03	8.62258097E-18	8.41094142E-08	2.33621770E-02	1.26015581E+01	2.33621770E-02

\$AS001

CASE II 30 SECOND BURN

N=+5,WDSQ=C.,DWOS=10.,H=0.,

CODEI=1,CODEII=1,P=0.,

ACC=0.,

OUTST=C.,50.,100.,150.,200.,250.,300.,

350.,400.,450.,500.,550.,600.,650.,700.,

750.,800.,850.,900.,948.,962.,1000.,

1050.,1100.,1150.,1155.,1186.,1200.,1250.,

1280.,1300.,1350.,1400.,1450.,1500.,1550.,

1600.,1650.,1680.,1700.,1744.,1750.,1800.,

1850.,1900.,1950.,2000.,2050.,2080.,2100.,

2120.,2200.,2250.,2300.,

RHDAC=2080.,900.,2120.,100.,

\$END

Saturn 1B/Centaur

t = 30
Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.20815645E+01	1.45964202E+02	2.82246762E+03	2.82246762E+03	2.82246762E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-7.24244432E-03	3.04182416E+00	-7.24244432E-03
5.00000000E+01	1.32568189E+05	7.78606135E+03	-7.24177343E-03	2.67932713E+00	-7.26421931E-03
1.00000000E+02	9.88758891E+05	2.75600252E+04	-7.23224983E-03	2.31492400E+00	-7.31242142E-03
1.50000000E+02	2.78800911E+06	4.29638269E+04	-7.19576274E-03	1.94881373E+00	-7.32188786E-03
2.00000000E+02	5.15961523E+06	5.10801485E+04	-7.11694574E-03	1.58380300E+00	-7.26828268E-03
2.50000000E+02	7.89643030E+06	5.85295633E+04	-6.98700813E-03	1.22282912E+00	-7.16203281E-03
3.00000000E+02	1.12849055E+07	7.86953497E+04	-6.79683701E-03	8.67768983E-01	-7.03437993E-03
3.50000000E+02	1.57239214E+07	9.73123871E+04	-6.52829985E-03	5.20805244E-01	-6.82482984E-03
4.00000000E+02	2.08635817E+07	1.06781543E+05	-6.16321343E-03	1.87351045E-01	-6.49171948E-03
4.50000000E+02	2.62581223E+07	1.07567198E+05	-5.69206116E-03	-1.26156961E-01	-6.02618982E-03
5.00000000E+02	3.14827714E+07	1.00107496E+05	-5.11402970E-03	-4.13052166E-01	-5.42802844E-03
5.50000000E+02	3.61449973E+07	8.52213234E+04	-4.43651045E-03	-6.66898223E-01	-4.70645748E-03
6.00000000E+02	3.98974952E+07	6.38958179E+04	-3.67430719E-03	-8.81924372E-01	-3.87872281E-03
6.50000000E+02	4.24460544E+07	3.72628426E+04	-2.84865097E-03	-1.05340166E+00	-2.96906364E-03
7.00000000E+02	4.35560041E+07	6.56589929E+03	-1.98607092E-03	-1.17796310E+00	-2.00750422E-03
7.50000000E+02	4.30567992E+07	-2.68808736E+04	-1.11715425E-03	-1.25385962E+00	-1.02850358E-03
8.00000000E+02	4.16977783E+07	-2.74823275E+04	-2.69558331E-04	-1.28390897E+00	-1.77982303E-04
8.50000000E+02	4.03084958E+07	-2.80880418E+04	5.50554907E-04	-1.27211463E+00	6.45132073E-04
9.00000000E+02	3.88892277E+07	-2.86785643E+04	1.34258137E-03	-1.21986368E+00	1.44017168E-03
9.48000000E+02	3.74996550E+07	-2.92137264E+04	2.07595576E-03	-1.13295916E+00	2.17639034E-03
9.62000000E+02	3.70896228E+07	-2.93615933E+04	2.28480670E-03	-1.10101937E+00	2.38605358E-03
1.00000000E+03	3.59463101E+07	-3.05575500E+04	2.39941658E-03	-1.00782768E+00	2.52094228E-03
1.05000000E+03	3.43967382E+07	-3.16127535E+04	2.57414830E-03	-8.76735619E-01	2.73164144E-03
1.10000000E+03	3.27752419E+07	-3.30256637E+04	2.79079714E-03	-7.33513715E-01	3.01096823E-03
1.15000000E+03	3.11158959E+07	-3.33358346E+04	3.03099911E-03	-5.76854516E-01	3.25323800E-03
1.15500000E+03	3.09484064E+07	-3.36584117E+04	3.05433165E-03	-5.60524540E-01	3.27872106E-03
1.18600000E+03	2.98616948E+07	-3.75781761E+04	3.19086933E-03	-4.56679605E-01	3.39399460E-03
1.20000000E+03	2.93135497E+07	-4.06711184E+04	3.24108475E-03	-4.08691895E-01	3.46092863E-03
1.25000000E+03	2.69826837E+07	-5.16030113E+04	3.42298373E-03	-2.28708180E-01	3.71785809E-03
1.28000000E+03	2.53906646E+07	-5.42423471E+04	3.52437704E-03	-1.15385114E-01	3.83433331E-03
1.30000000E+03	2.43009062E+07	-5.46646939E+04	3.57215875E-03	-3.95728952E-02	3.81511295E-03

1.35000000E+03	2.15697551E+07	-5.44715557E+04	3.68242090E-03	1.53984764E-01	3.92451670E-03
1.40000000E+03	1.88648788E+07	-5.36108279E+04	3.77960230E-03	3.52611210E-01	4.01787265E-03
1.45000000E+03	1.62200652E+07	-5.20666224E+04	3.86391018E-03	5.55506738E-01	4.09531739E-03
1.50000000E+03	1.36698291E+07	-4.98257564E+04	3.93571600E-03	7.61882871E-01	4.15716380E-03
1.55000000E+03	1.12492806E+07	-4.68767893E+04	4.00869404E-03	9.73659749E-01	4.47746194E-03
1.60000000E+03	8.98137756E+06	-4.45006006E+04	4.11506028E-03	1.19953192E+00	4.56006628E-03
1.65000000E+03	6.78762127E+06	-4.30297227E+04	4.19799079E-03	1.42939201E+00	4.62828801E-03
1.68000000E+03	5.52981238E+06	-4.03499490E+04	4.23684581E-03	1.56851250E+00	4.64034530E-03
1.70000000E+03	4.75512450E+06	-3.68783095E+04	4.25847399E-03	1.66121800E+00	4.62725708E-03
1.74400000E+03	3.39202503E+06	-2.40193255E+04	4.32932665E-03	1.87285608E+00	4.72586838E-03
1.75000000E+03	3.25348385E+06	-2.21867892E+04	4.33729906E-03	1.90114188E+00	4.70311587E-03
1.80000000E+03	2.41221817E+06	-1.35452596E+04	4.39323136E-03	2.13327795E+00	4.61419808E-03
1.85000000E+03	1.79032580E+06	-1.12918780E+04	4.43506902E-03	2.36413056E+00	4.61734308E-03
1.90000000E+03	1.28688562E+06	-8.80720675E+03	4.46563408E-03	2.59477606E+00	4.60632428E-03
1.95000000E+03	9.13451275E+05	-6.09178735E+03	4.48741116E-03	2.82456982E+00	4.58372400E-03
2.00000000E+03	6.26688079E+05	-5.36934733E+03	4.50275235E-03	3.05385896E+00	4.58677969E-03
2.05000000E+03	3.77455988E+05	-4.59054315E+03	4.51272889E-03	3.28314792E+00	4.58384497E-03
2.08000000E+03	2.47103896E+05	-4.09621774E+03	4.51646142E-03	3.42060312E+00	4.57953838E-03
2.10000000E+03	1.91849582E+05	-2.59128244E+03	4.51821267E-03	3.51179978E+00	4.55795626E-03
2.12000000E+03	1.43506528E+05	-2.24152986E+03	4.51954943E-03	3.60291807E+00	4.55379217E-03
2.20000000E+03	3.36673600E+04	-6.16859328E+02	4.52206666E-03	3.96627332E+00	4.53134274E-03
2.25000000E+03	9.51132550E+03	-3.46878324E+02	4.52299070E-03	4.19328029E+00	4.54033462E-03
2.30000000E+03	1.91966093E-29	-1.00368841E-09	4.52325035E-03	4.42013175E+00	4.52325035E-03

Saturn 1B/Centaur

t = 30
Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.76905298E+01	7.66765443E+02	2.82246762E+03	2.82246762E+03	2.82246762E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-7.10937894E-03	2.24146782E+00	-7.10937894E-03
5.00000000E+01	5.02317202E+05	2.92693606E+04	-7.10682570E-03	1.88457887E+00	-7.19120426E-03
1.00000000E+02	3.65313975E+06	9.99322096E+04	-7.07131544E-03	1.52073174E+00	-7.36201634E-03
1.50000000E+02	1.00629367E+07	1.50816958E+05	-6.93837882E-03	1.15121680E+00	-7.38111887E-03
2.00000000E+02	1.82675264E+07	1.74315268E+05	-6.65697920E-03	7.86449033E-01	-7.17342912E-03
2.50000000E+02	2.74192843E+07	1.91166801E+05	-6.20152540E-03	4.36981352E-01	-6.77318366E-03
3.00000000E+02	3.76730344E+07	2.17023983E+05	-5.55274157E-03	1.11460638E-01	-6.20783122E-03
3.50000000E+02	4.85636917E+07	2.11780370E+05	-4.68993058E-03	-1.78544473E-01	-5.33526703E-03
4.00000000E+02	5.82258553E+07	1.69105164E+05	-3.61846973E-03	-4.16639449E-01	-4.13871011E-03
4.50000000E+02	6.49535710E+07	9.58880860E+04	-2.38056283E-03	-5.87965296E-01	-2.67841345E-03
5.00000000E+02	6.74941328E+07	3.48034614E+03	-1.04837283E-03	-6.81819359E-01	-1.05928934E-03
5.50000000E+02	6.51746579E+07	-9.65352356E+04	2.86662135E-04	-6.93344797E-01	5.92447109E-04
6.00000000E+02	5.79111039E+07	-1.92346852E+05	1.52551558E-03	-6.24299405E-01	2.14087198E-03
6.50000000E+02	4.61955413E+07	-2.72883576E+05	2.57330306E-03	-4.83172012E-01	3.45511025E-03
7.00000000E+02	3.10353953E+07	-3.28749269E+05	3.35027483E-03	-2.84572380E-01	4.42342311E-03
7.50000000E+02	1.38490101E+07	-3.53019862E+05	3.80114509E-03	-4.79598165E-02	4.96537240E-03
8.00000000E+02	-3.79976573E+06	-3.52826566E+05	3.90162143E-03	2.04585506E-01	5.07730261E-03
8.50000000E+02	-2.14231756E+07	-3.52006579E+05	3.64932365E-03	4.53859259E-01	4.83458907E-03
9.00000000E+02	-3.89904550E+07	-3.50590027E+05	3.04506922E-03	6.82147581E-01	4.23809223E-03
9.48000000E+02	-5.57760556E+07	-3.48737211E+05	2.13516832E-03	8.65174849E-01	3.33410048E-03
9.62000000E+02	-6.06540919E+07	-3.48119984E+05	1.80915988E-03	9.09612550E-01	3.00957361E-03
1.00000000E+03	-7.37552388E+07	-3.42483209E+05	1.59762917E-03	1.02303307E+00	2.95966613E-03
1.05000000E+03	-9.07499298E+07	-3.35863473E+05	1.18696132E-03	1.16884976E+00	2.86021617E-03
1.10000000E+03	-1.07229692E+08	-3.24678948E+05	5.44817391E-04	1.30793435E+00	2.70934371E-03
1.15000000E+03	-1.23379865E+08	-3.21280869E+05	-3.22242329E-04	1.42167251E+00	1.81963013E-03
1.15500000E+03	-1.24975657E+08	-3.17031517E+05	-4.15610397E-04	1.43046699E+00	1.69793305E-03
1.18600000E+03	-1.34160901E+08	-2.56054550E+05	-9.96961866E-04	1.46759962E+00	3.87116783E-04
1.20000000E+03	-1.37359658E+08	-2.00899891E+05	-1.22745210E-03	1.46932563E+00	-1.41506740E-04
1.25000000E+03	-1.40874211E+08	5.93269112E+04	-2.13208684E-03	1.40551482E+00	-2.47109776E-03
1.28000000E+03	-1.37431678E+08	1.68944931E+05	-2.67180393E-03	1.31375153E+00	-3.63720353E-03
1.30000000E+03	-1.33683717E+08	2.05504619E+05	-2.93260892E-03	1.24103779E+00	-3.84596278E-03

1.35000000E+03	-1.22883812E+08	2.25864906E+05	-3.54974580E-03	1.03076245E+00	-4.55360983E-03
1.40000000E+03	-1.11165016E+08	2.42160122E+05	-4.11270974E-03	7.86882217E-01	-5.18897696E-03
1.45000000E+03	-9.87450503E+07	2.53822794E+05	-4.61753500E-03	5.13177393E-01	-5.74563631E-03
1.50000000E+03	-8.58682766E+07	2.60355698E+05	-5.06144801E-03	2.13714696E-01	-6.21858444E-03
1.55000000E+03	-7.28021518E+07	2.61309840E+05	-5.52764750E-03	-1.22180126E-01	-8.14074590E-03
1.60000000E+03	-5.98269203E+07	2.58135466E+05	-6.22553812E-03	-5.46330977E-01	-8.80689278E-03
1.65000000E+03	-4.70116320E+07	2.53487950E+05	-6.78764553E-03	-1.00037569E+00	-9.32252503E-03
1.68000000E+03	-3.95372024E+07	2.42635787E+05	-7.06078817E-03	-1.28296447E+00	-9.48714604E-03
1.70000000E+03	-3.48276075E+07	2.27037661E+05	-7.21723664E-03	-1.47287363E+00	-9.48761325E-03
1.74400000E+03	-2.61294425E+07	1.61278883E+05	-7.74935829E-03	-1.94702294E+00	-1.04119562E-02
1.75000000E+03	-2.51923814E+07	1.51188809E+05	-7.81093237E-03	-2.00916529E+00	-1.03037404E-02
1.80000000E+03	-1.91707671E+07	1.01013454E+05	-8.25033033E-03	-2.50998843E+00	-9.89818439E-03
1.85000000E+03	-1.44721913E+07	8.64929915E+04	-8.58554989E-03	-3.00753282E+00	-9.98172409E-03
1.90000000E+03	-1.05652292E+07	6.93480088E+04	-8.83449533E-03	-3.50610946E+00	-9.94229100E-03
1.95000000E+03	-7.58098254E+06	4.95884804E+04	-9.01431078E-03	-4.00001783E+00	-9.79831837E-03
2.00000000E+03	-5.23595592E+06	4.41069163E+04	-9.14202337E-03	-4.49101161E+00	-9.83227245E-03
2.05000000E+03	-3.18086763E+06	3.79908679E+04	-9.22568193E-03	-4.98237809E+00	-9.81423140E-03
2.08000000E+03	-2.10017984E+06	3.40170291E+04	-9.25724900E-03	-5.27634689E+00	-9.78107144E-03
2.10000000E+03	-1.63603689E+06	2.18090998E+04	-9.27215668E-03	-5.46878041E+00	-9.60665208E-03
2.12000000E+03	-1.22843023E+06	1.89350566E+04	-9.28357623E-03	-5.66058266E+00	-9.57283771E-03
2.20000000E+03	-2.92314687E+05	5.33114208E+03	-9.30524568E-03	-6.41854371E+00	-9.38541323E-03
2.25000000E+03	-8.29092864E+04	3.01766315E+03	-9.31328302E-03	-6.89164237E+00	-9.46416618E-03
2.30000000E+03	-4.52660822E-28	2.47808056E-09	-9.31554887E-03	-7.36342765E+00	-9.31554887E-03

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Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.95094158E+01	2.45118225E+03	2.82246762E+03	2.82246762E+03	2.82246762E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.51406229E-02	3.77008692E+00	-1.51406229E-02
5.00000000E+01	2.63817666E+06	1.52326555E+05	-1.51271468E-02	3.00559914E+00	-1.55662782E-02
1.00000000E+02	1.86151503E+07	4.97115474E+05	-1.49441498E-02	2.20618345E+00	-1.63902493E-02
1.50000000E+02	4.97350535E+07	7.16851987E+05	-1.42788424E-02	1.38204130E+00	-1.63832416E-02
2.00000000E+02	8.78949093E+07	7.93958187E+05	-1.29087617E-02	5.86618951E-01	-1.52610492E-02
2.50000000E+02	1.28276198E+08	8.11805215E+05	-1.07485970E-02	-1.28380471E-01	-1.31761899E-02
3.00000000E+02	1.66289214E+08	6.54464114E+05	-7.79042829E-03	-7.09235118E-01	-9.76593653E-03
3.50000000E+02	1.89395426E+08	2.41810235E+05	-4.19907677E-03	-1.08093358E+00	-4.93592013E-03
4.00000000E+02	1.88626473E+08	-2.80978450E+05	-3.75163111E-04	-1.19280910E+00	4.89247728E-04
4.50000000E+02	1.61200942E+08	-8.03960873E+05	3.16681577E-03	-1.03588252E+00	5.66410463E-03
5.00000000E+02	1.10381574E+08	-1.19881095E+06	5.91563736E-03	-6.45899796E-01	9.67584648E-03
5.50000000E+02	4.49973965E+07	-1.37451368E+06	7.48411483E-03	-9.93263633E-02	1.18380238E-02
6.00000000E+02	-2.25691464E+07	-1.28197508E+06	7.70067803E-03	5.01014165E-01	1.18019751E-02
6.50000000E+02	-7.87119208E+07	-9.21892975E+05	6.65780212E-03	1.04513313E+00	9.63684492E-03
7.00000000E+02	-1.11091717E+08	-3.43161195E+05	4.71144208E-03	1.43715614E+00	5.83163574E-03
7.50000000E+02	-1.10805621E+08	3.68238598E+05	2.43307275E-03	1.61471034E+00	1.21865544E-03
8.00000000E+02	-9.20710503E+07	3.81153507E+05	4.03228948E-04	1.62195001E+00	-8.66842660E-04
8.50000000E+02	-7.26958836E+07	3.93736981E+05	-1.24548970E-03	1.53437771E+00	-2.57126840E-03
9.00000000E+02	-5.27142350E+07	4.05313046E+05	-2.50055608E-03	1.37142232E+00	-3.87979609E-03
9.48000000E+02	-3.30204717E+07	4.14995131E+05	-3.32435311E-03	1.16275097E+00	-4.75107499E-03
9.62000000E+02	-2.71927983E+07	4.17504530E+05	-3.49296666E-03	1.09492640E+00	-4.93263745E-03
1.00000000E+03	-1.08801328E+07	4.36727688E+05	-3.55231740E-03	9.00538531E-01	-5.28915950E-03
1.05000000E+03	1.12570515E+07	4.50768780E+05	-3.54957950E-03	6.24141994E-01	-5.79528678E-03
1.10000000E+03	3.42312355E+07	4.65154548E+05	-3.39946365E-03	3.17570980E-01	-6.50049396E-03
1.15000000E+03	5.75307127E+07	4.66404457E+05	-3.05453302E-03	1.61232924E-04	-6.16389606E-03
1.15500000E+03	5.98624946E+07	4.66259561E+05	-3.01040019E-03	-3.05470433E-02	-6.11879726E-03
1.18600000E+03	7.41529622E+07	4.45935104E+05	-2.71055657E-03	-2.11090900E-01	-5.12101659E-03
1.20000000E+03	8.01988892E+07	4.16375432E+05	-2.57953290E-03	-2.80814162E-01	-4.83021091E-03
1.25000000E+03	9.58892195E+07	1.91394819E+05	-2.00534631E-03	-4.85519498E-01	-3.09903099E-03
1.28000000E+03	9.96491739E+07	5.60147883E+04	-1.62557545E-03	-5.61505066E-01	-1.94565995E-03
1.30000000E+03	1.00245225E+08	3.08421003E+03	-1.43319985E-03	-5.94743823E-01	-1.44690745E-03

1.35000000E+03	9.95189983E+07	-3.26704911E+04	-9.52280687E-04	-6.51138654E-01	-8.07078504E-04
1.40000000E+03	9.69397419E+07	-7.07309287E+04	-4.79261210E-04	-6.75412186E-01	-1.64901527E-04
1.45000000E+03	9.24380171E+07	-1.09266137E+05	-2.32538249E-05	-6.67877209E-01	4.62373452E-04
1.50000000E+03	8.60350754E+07	-1.46487718E+05	-4.06514081E-04	-6.29709890E-01	1.05757061E-03
1.55000000E+03	7.78396914E+07	-1.80641053E+05	8.91177160E-04	-5.52621365E-01	2.69758769E-03
1.60000000E+03	6.81749066E+07	-1.99627284E+05	1.66054091E-03	-3.91755046E-01	3.65681376E-03
1.65000000E+03	5.80635014E+07	-2.04869319E+05	2.32518811E-03	-1.90554283E-01	4.37388131E-03
1.68000000E+03	5.18661403E+07	-2.08201695E+05	2.67238985E-03	-5.35191190E-02	4.75440680E-03
1.70000000E+03	4.76955363E+07	-2.08285428E+05	2.88199459E-03	4.37600011E-02	4.96484887E-03
1.74400000E+03	3.89303711E+07	-1.84338701E+05	3.64249491E-03	3.33773675E-01	6.68579380E-03
1.75000000E+03	3.78115949E+07	-1.78573121E+05	-3.73454234E-03	3.73869500E-01	6.67886420E-03
1.80000000E+03	2.99430069E+07	-1.42239295E+05	4.40895035E-03	7.07185237E-01	6.72933037E-03
1.85000000E+03	2.31763298E+07	-1.27462380E+05	4.93891252E-03	1.05126165E+00	6.99641663E-03
1.90000000E+03	1.72947376E+07	-1.06813789E+05	5.34190250E-03	1.40323322E+00	7.04819306E-03
1.95000000E+03	1.25936609E+07	-8.02483689E+04	5.63857255E-03	1.75286520E+00	6.90732147E-03
2.00000000E+03	8.77404724E+06	-7.22969700E+04	5.85158703E-03	2.10052385E+00	6.98299501E-03
2.05000000E+03	5.38796823E+06	-6.29059862E+04	5.99242460E-03	2.44963514E+00	6.96695575E-03
2.08000000E+03	3.59437400E+06	-5.65809737E+04	6.04612890E-03	2.65797124E+00	6.91740968E-03
2.10000000E+03	2.81111790E+06	-3.68913959E+04	6.07169058E-03	2.79119748E+00	6.63750954E-03
2.12000000E+03	2.12010341E+06	-3.21736748E+04	6.09135257E-03	2.92341490E+00	6.58285386E-03
2.20000000E+03	5.12712561E+05	-9.30191589E+03	6.12899369E-03	3.43696836E+00	6.26887212E-03
2.25000000E+03	1.46066623E+05	-5.30461774E+03	6.14311948E-03	3.75714442E+00	6.40835037E-03
2.30000000E+03	3.89817851E-25	-1.60976080E-08	6.14711635E-03	4.07508925E+00	6.14711635E-03

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Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
7.20145772E+01	5.18609933E+03	2.82246762E+03	2.82246762E+03	2.82246762E+03	0.	
STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.		-4.02330986E-03	8.40140481E-01	-4.02330986E-03
5.00000000E+01	1.21652027E+06	6.96080428E+04		-4.01706577E-03	6.35537122E-01	-4.21773385E-03
1.00000000E+02	8.31962574E+06	2.16305568E+05		-3.93429439E-03	4.15575718E-01	-4.56352317E-03
1.50000000E+02	2.14733080E+07	2.95031335E+05		-3.64285581E-03	1.86599226E-01	-4.50895329E-03
2.00000000E+02	3.67397777E+07	3.08736425E+05		-3.06180534E-03	-2.73160729E-02	-3.97650950E-03
2.50000000E+02	5.17564323E+07	2.84943589E+05		-2.17488694E-03	-2.04181438E-01	-3.02697190E-03
3.00000000E+02	6.21792273E+07	9.16021459E+04		-1.01992698E-03	-3.16230920E-01	-1.29642922E-03
3.50000000E+02	5.89202792E+07	-2.23519916E+05		2.17438467E-04	-3.26099755E-01	8.98547620E-04
4.00000000E+02	4.05284194E+07	-4.97110273E+05		1.23481444E-03	-2.31910389E-01	2.76413993E-03
4.50000000E+02	1.12828740E+07	-6.45343276E+05		1.76532472E-03	-6.40360840E-02	3.76991055E-03
5.00000000E+02	-2.09929622E+07	-6.14847028E+05		1.66566551E-03	1.25179070E-01	3.59420428E-03
5.50000000E+02	-4.73297495E+07	-4.14016365E+05		9.65628364E-04	2.76152485E-01	2.27706644E-03
6.00000000E+02	-6.05763896E+07	-1.05434277E+05		-1.39258075E-04	3.40046103E-01	1.98047461E-04
6.50000000E+02	-5.77182023E+07	2.12157599E+05		-1.34878339E-03	2.93371086E-01	-2.03435817E-03
7.00000000E+02	-4.09916942E+07	4.32734091E+05		-2.35434751E-03	1.45035487E-01	-3.76693724E-03
7.50000000E+02	-1.74623946E+07	4.73958659E+05		-2.94235617E-03	-6.65602872E-02	-4.50542860E-03
8.00000000E+02	6.17539544E+06	4.70915571E+05		-3.05497462E-03	-2.96822734E-01	-4.62414947E-03
8.50000000E+02	2.95645707E+07	4.64023351E+05		-2.69700023E-03	-5.20915070E-01	-4.25944497E-03
9.00000000E+02	5.25184378E+07	4.53587721E+05		-1.87529972E-03	-7.14832190E-01	-3.41881365E-03
9.48000000E+02	7.39946057E+07	4.40886683E+05		-6.59798152E-04	-8.50778284E-01	-2.17553323E-03
9.62000000E+02	8.01386963E+07	4.36819097E+05		-2.28198346E-04	-8.78189038E-01	-1.73447109E-03
1.00000000E+03	9.59184864E+07	4.00744976E+05		4.91361183E-05	-9.40194835E-01	-1.54460471E-03
1.05000000E+03	1.15171421E+08	3.61089348E+05		5.76500625E-04	-1.01080590E+00	-1.22242826E-03
1.10000000E+03	1.31430997E+08	2.97513949E+05		1.37713151E-03	-1.05628015E+00	-6.06294814E-04
1.15000000E+03	1.45860936E+08	2.79678636E+05		2.42014153E-03	-1.05799998E+00	5.55617283E-04
1.15500000E+03	1.47206076E+08	2.58388739E+05		2.53032376E-03	-1.05459184E+00	8.07732170E-04
1.18600000E+03	1.52112977E+08	-3.11489176E+04		3.20464469E-03	-9.97964666E-01	3.37301722E-03
1.20000000E+03	1.49934350E+08	-2.77612414E+05		3.46141425E-03	-9.39521599E-01	4.96202189E-03
1.25000000E+03	1.11076208E+08	-1.19715477E+06		4.32860985E-03	-5.21670424E-01	1.11694942E-02
1.28000000E+03	7.18535908E+07	-1.38509049E+06		4.68448071E-03	-1.61965676E-01	1.25992835E-02
1.30000000E+03	4.39791397E+07	-1.39531276E+06		4.79589069E-03	5.68136072E-02	1.09972807E-02

1.35000000E+03	-2.50599198E+07	-1.35517484E+06	4.84056521E-03	6.05949098E-01	1.08635645E-02
1.40000000E+03	-9.04466462E+07	-1.24966693E+06	4.56079041E-03	1.13290129E+00	1.01148656E-02
1.45000000E+03	-1.49010136E+08	-1.08329274E+06	3.98183822E-03	1.60792303E+00	8.79647264E-03
1.50000000E+03	-1.97891927E+08	-8.63985313E+05	3.14354300E-03	2.00428976E+00	6.98347773E-03
1.55000000E+03	-2.34705467E+08	-6.02235951E+05	1.83351576E-03	2.33338056E+00	7.85587526E-03
1.60000000E+03	-2.58491576E+08	-4.05875833E+05	-7.71391406E-04	2.59882227E+00	3.28736693E-03
1.65000000E+03	-2.76502515E+08	-3.01399894E+05	-3.59173316E-03	2.67064566E+00	-5.77734213E-04
1.68000000E+03	-2.83443082E+08	-1.34867716E+05	-5.36261452E-03	2.60584489E+00	-4.01393736E-03
1.70000000E+03	-2.84296362E+08	5.97532573E+04	-6.55922079E-03	2.49516454E+00	-7.15675336E-03
1.74400000E+03	-2.69374539E+08	6.27872708E+05	-1.14690351E-02	1.85039758E+00	-2.18347603E-02
1.75000000E+03	-2.65417183E+08	6.89447163E+05	-1.21108590E-02	1.71436275E+00	-2.34784957E-02
1.80000000E+03	-2.24288995E+08	8.78550411E+05	-1.70227441E-02	3.08186477E-01	-3.13547247E-02
1.85000000E+03	-1.80567760E+08	8.60409372E+05	-2.10699061E-02	-1.35726569E+00	-3.49585773E-02
1.90000000E+03	-1.39282657E+08	7.80308333E+05	-2.42616381E-02	-3.15700578E+00	-3.67266274E-02
1.95000000E+03	-1.03624073E+08	6.35090798E+05	-2.66786035E-02	-5.00027504E+00	-3.67195647E-02
2.00000000E+03	-7.30958542E+07	5.83328828E+05	-2.84414896E-02	-6.86105330E+00	-3.75702662E-02
2.05000000E+03	-4.55643254E+07	5.15191457E+05	-2.96224132E-02	-8.74366751E+00	-3.76036907E-02
2.08000000E+03	-3.08253197E+07	4.66427737E+05	-3.00792882E-02	-9.86729419E+00	-3.72617295E-02
2.10000000E+03	-2.42354269E+07	3.11408405E+05	-3.02990528E-02	-1.05724431E+01	-3.50752553E-02
2.12000000E+03	-1.83847239E+07	2.73255998E+05	-3.04690247E-02	-1.12697620E+01	-3.46434213E-02
2.20000000E+03	-4.53944010E+06	8.18097201E+04	-3.07981893E-02	-1.39335402E+01	-3.20284106E-02
2.25000000E+03	-1.30048348E+06	4.70975121E+04	-3.09235754E-02	-1.55947733E+01	-3.32784510E-02
2.30000000E+03	-4.34342448E-26	3.42690152E-09	-3.09592163E-02	-1.72370633E+01	-3.09592163E-02

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Mode 5

UMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
9.38731501E+01	8.81216944E+03	2.82246762E+03	2.82246762E+03	2.82246762E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.62892354E-02	3.01054425E+00	-1.62892354E-02
5.00000000E+01	7.27143958E+06	4.12779034E+05	-1.62517583E-02	2.17553635E+00	-1.74417296E-02
1.00000000E+02	4.83221717E+07	1.22351977E+06	-1.57655448E-02	1.25271151E+00	-1.93247405E-02
1.50000000E+02	1.20467815E+08	1.57054265E+06	-1.41060534E-02	2.89015660E-01	-1.87165570E-02
2.00000000E+02	1.99083733E+08	1.53534365E+06	-1.09073913E-02	-5.74734439E-01	-1.54562074E-02
2.50000000E+02	2.69582384E+08	1.23182914E+06	-6.19554296E-03	-1.21799789E+00	-9.87916009E-03
3.00000000E+02	2.96423565E+08	-4.43575272E+05	-3.99550227E-04	-1.46569730E+00	9.39387369E-04
3.50000000E+02	2.17656040E+08	-2.60953447E+06	4.92273072E-03	-1.10686934E+00	1.28744956E-02
4.00000000E+02	5.24891277E+07	-3.77003315E+06	7.72136281E-03	-2.71083167E-01	1.93196100E-02
4.50000000E+02	-1.33758071E+08	-3.41455517E+06	6.87879341E-03	6.85222487E-01	1.74851934E-02
5.00000000E+02	-2.65374301E+08	-1.66645316E+06	2.74089246E-03	1.34733623E+00	7.96791542E-03
5.50000000E+02	-2.89564890E+08	7.14630022E+05	-3.00909385E-03	1.41891044E+00	-5.27275563E-03
6.00000000E+02	-2.01050492E+08	2.67261338E+06	-8.08035593E-03	8.51883891E-01	-1.66305856E-02
6.50000000E+02	-4.48773815E+07	3.30188459E+06	-1.05923867E-02	-1.30261025E-01	-2.12622321E-02
7.00000000E+02	1.00405995E+08	2.23289245E+06	-9.94757167E-03	-1.12766090E+00	-1.72364843E-02
7.50000000E+02	1.55093105E+08	-2.14752335E+05	-7.18756579E-03	-1.73974882E+00	-6.47933218E-03
8.00000000E+02	1.43051895E+08	-2.68254872E+05	-4.20160255E-03	-1.98353387E+00	-3.30772938E-03
8.50000000E+02	1.28193673E+08	-3.26506560E+05	-1.48428825E-03	-2.07466527E+00	-3.84885691E-04
9.00000000E+02	1.10391720E+08	-3.85345494E+05	9.06472749E-04	-2.02735919E+00	2.21776516E-03
9.48000000E+02	9.05914239E+07	-4.38939088E+05	2.84002934E-03	-1.86819076E+00	4.34906873E-03
9.62000000E+02	8.42429567E+07	-4.53612923E+05	3.32994144E-03	-1.80344591E+00	4.89412394E-03
1.00000000E+03	6.43998831E+07	-5.70642835E+05	3.56392064E-03	-1.59836844E+00	5.83333595E-03
1.05000000E+03	3.38489862E+07	-6.67321179E+05	3.80727568E-03	-1.27757790E+00	7.13183606E-03
1.10000000E+03	-2.94364396E+06	-7.83497151E+05	3.90454694E-03	-8.71749169E-01	9.12786128E-03
1.15000000E+03	-4.26316828E+07	-8.01850701E+05	3.73378606E-03	-4.14960303E-01	9.07945740E-03
1.15500000E+03	-4.66751635E+07	-8.15281687E+05	3.70021626E-03	-3.69417492E-01	9.13542751E-03
1.18600000E+03	-7.31678756E+07	-9.02913084E+05	3.43427492E-03	-8.88100535E-02	8.31488618E-03
1.20000000E+03	-8.59594052E+07	-9.16108998E+05	3.29928373E-03	2.74934692E-02	8.25122425E-03
1.25000000E+03	-1.23310138E+08	-4.54113622E+05	2.61145745E-03	3.89714146E-01	5.20639243E-03
1.28000000E+03	-1.30898764E+08	-3.42420855E+04	2.11538124E-03	5.04053060E-01	2.31105030E-03
1.30000000E+03	-1.29882278E+08	1.37815516E+05	1.86408044E-03	5.39326608E-01	1.25156704E-03

1.35000000E+03	-1.20137992E+08	2.53140847E+05	1.26075709E-03	5.73944482E-01	1.35686664E-04
1.40000000E+03	-1.04544502E+08	3.69906849E+05	7.18313166E-04	5.53804400E-01	-9.25717276E-04
1.45000000E+03	-8.33047230E+07	4.77274838E+05	2.64599373E-04	4.83552521E-01	-1.85662213E-03
1.50000000E+03	-5.71332653E+07	5.65739761E+05	-7.47659004E-05	3.71456198E-01	-2.58916484E-03
1.55000000E+03	-2.71743220E+07	6.27111434E+05	-3.13317902E-04	1.94096666E-01	-6.58443224E-03
1.60000000E+03	4.64102002E+06	6.37587166E+05	-4.32301601E-04	-1.44094093E-01	-6.80817326E-03
1.65000000E+03	3.61209804E+07	6.15363898E+05	-2.16814350E-04	-4.76503367E-01	-6.37045333E-03
1.68000000E+03	5.38412631E+07	5.52886165E+05	6.82497471E-05	-6.56214217E-01	-5.46061190E-03
1.70000000E+03	6.40544759E+07	4.60864003E+05	3.17093393E-04	-7.54564049E-01	-4.29154664E-03
1.74400000E+03	7.67143235E+07	7.86237313E+04	1.58099711E-03	-9.23853936E-01	2.82976053E-04
1.75000000E+03	7.70210627E+07	2.45640787E+04	1.76554440E-03	-9.18876042E-01	1.36053073E-03
1.80000000E+03	7.09963740E+07	-2.00404867E+05	3.26425493E-03	-6.93963619E-01	6.53350236E-03
1.85000000E+03	6.01036119E+07	-2.31533708E+05	4.57785427E-03	-3.20263734E-01	8.31528298E-03
1.90000000E+03	4.82606598E+07	-2.37671398E+05	5.66201181E-03	1.26890529E-01	9.45867952E-03
1.95000000E+03	3.68116602E+07	-2.15371373E+05	6.51087785E-03	6.14132017E-01	9.91595884E-03
2.00000000E+03	2.63329960E+07	-2.02520765E+05	7.14125380E-03	1.12114263E+00	1.03105928E-02
2.05000000E+03	1.66868968E+07	-1.82039677E+05	7.56974600E-03	1.63992888E+00	1.03898804E-02
2.08000000E+03	1.14585793E+07	-1.66054077E+05	7.73813928E-03	1.95046039E+00	1.02951777E-02
2.10000000E+03	9.05841437E+06	-1.13828195E+05	7.82004447E-03	2.14296140E+00	9.56587568E-03
2.12000000E+03	6.91282187E+06	-1.00543243E+05	7.88375230E-03	2.33287171E+00	9.41970162E-03
2.20000000E+03	1.74276990E+06	-3.12009656E+04	8.00857886E-03	3.04813404E+00	8.47776631E-03
2.25000000E+03	5.02017615E+05	-1.81315041E+04	8.05683773E-03	3.49506312E+00	8.96341294E-03
2.30000000E+03	1.99221107E-23	2.97622350E-06	8.07061665E-03	3.93502646E+00	8.07061665E-03

\$AS001

CASE III 60 SECOND BURN

N=+5, WUSQ=0., DWGS=10., H=0.,

CODEI=1, CODEII=1, P=0.,

ACC=0.,

OUTST=0., 50., 100., 150., 200., 250., 300.,

350., 400., 450., 500., 550., 600., 650., 700.,

750., 800., 850., 900., 948., 962., 1000.,

1050., 1100., 1150., 1155., 1186., 1200., 1250.,

1280., 1300., 1350., 1400., 1450., 1500., 1550.,

1600., 1650., 1680., 1700., 1744., 1750., 1800.,

1850., 1900., 1950., 2000., 2050., 2080., 2100.,

2120., 2200., 2250., 2300.,

RHOAC=2080., 900., 2120., 100.,

\$END

Saturn 1B/Centaur

t = 60
Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.39847597E+01	1.95573505E+02	2.34254534E+03	2.34254534E+03	2.34254534E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-7.68735829E-03	2.94669378E+00	-7.68735829E-03
5.00000000E+01	1.71025749E+05	1.00225087E+04	-7.68649170E-03	2.56184234E+00	-7.71538488E-03
1.00000000E+02	1.26677199E+06	3.51324802E+04	-7.67425991E-03	2.17455681E+00	-7.77645963E-03
1.50000000E+02	3.54994427E+06	5.43156145E+04	-7.62768698E-03	1.78514316E+00	-7.78713654E-03
2.00000000E+02	6.53725104E+06	6.41235202E+04	-7.52761135E-03	1.39720033E+00	-7.71759234E-03
2.50000000E+02	9.95563469E+06	7.26828922E+04	-7.36339869E-03	1.01446440E+00	-7.58074697E-03
3.00000000E+02	1.40859188E+07	9.38753103E+04	-7.12471271E-03	6.39506873E-01	-7.40807652E-03
3.50000000E+02	1.92446588E+07	1.10291274E+05	-6.79277437E-03	2.75491684E-01	-7.12885357E-03
4.00000000E+02	2.49015527E+07	1.13907036E+05	-6.35161273E-03	-7.09105802E-02	-6.70203987E-03
4.50000000E+02	3.04312407E+07	1.05312947E+05	-5.79756747E-03	-3.92194267E-01	-6.12469390E-03
5.00000000E+02	3.52455702E+07	8.54913706E+04	-5.13914616E-03	-6.81038662E-01	-5.40729972E-03
5.50000000E+02	3.88150269E+07	5.57564175E+04	-4.39606064E-03	-9.30964045E-01	-4.57267465E-03
6.00000000E+02	4.06813604E+07	1.76358717E+04	-3.59791828E-03	-1.13690560E+00	-3.65433899E-03
6.50000000E+02	4.08688649E+07	-6.34638716E+01	-2.78110043E-03	-1.29699234E+00	-2.78089535E-03
7.00000000E+02	4.08444762E+07	-9.24595861E+02	-1.96389523E-03	-1.41553587E+00	-1.96087704E-03
7.50000000E+02	4.07753704E+07	-1.84782409E+03	-1.14761980E-03	-1.49309112E+00	-1.14152585E-03
8.00000000E+02	4.06590913E+07	-2.80720507E+03	-3.33195212E-04	-1.52971621E+00	-3.23841103E-04
8.50000000E+02	4.04944789E+07	-3.77684816E+03	4.78421320E-04	-1.52552031E+00	4.91138604E-04
9.00000000E+02	4.02816656E+07	-4.73094843E+03	1.28626230E-03	-1.48066497E+00	1.30236125E-03
9.48000000E+02	4.00333235E+07	-5.60841748E+03	2.05735361E-03	-1.39954958E+00	2.07663492E-03
9.62000000E+02	3.99530807E+07	-5.85393359E+03	2.28131714E-03	-1.36890207E+00	2.30150312E-03
1.00000000E+03	3.96844336E+07	-7.86158490E+03	2.40633095E-03	-1.27889360E+00	2.43759604E-03
1.05000000E+03	3.92539773E+07	-9.69122040E+03	2.60255083E-03	-1.15192985E+00	2.65083200E-03
1.10000000E+03	3.86964721E+07	-1.22266990E+04	2.85420104E-03	-1.01258634E+00	2.93571236E-03
1.15000000E+03	3.80698986E+07	-1.28199709E+04	3.14281500E-03	-8.58464148E-01	3.22828148E-03
1.15500000E+03	3.80041779E+07	-1.34662496E+04	3.17141448E-03	-8.42240415E-01	3.26118948E-03
1.18600000E+03	3.74968728E+07	-2.17221718E+04	3.34091581E-03	-7.37981929E-01	3.45833296E-03
1.20000000E+03	3.71443837E+07	-2.85550153E+04	3.40426131E-03	-6.88859646E-01	3.55861275E-03
1.25000000E+03	3.50007109E+07	-5.58848407E+04	3.63773305E-03	-5.00502457E-01	3.95707500E-03
1.28000000E+03	3.31824378E+07	-6.49177796E+04	3.76978784E-03	-3.78981922E-01	4.14074658E-03
1.30000000E+03	3.18584149E+07	-6.73849198E+04	3.83233502E-03	-2.97071907E-01	4.13182356E-03

1.35000000E+03	2.84632269E+07	-6.82626860E+04	3.97735656E-03	-8.66718679E-02	4.28074628E-03
1.40000000E+03	2.50484094E+07	-6.81648353E+04	4.10598835E-03	1.30657140E-01	4.40894317E-03
1.45000000E+03	2.16634936E+07	-6.70621407E+04	4.21825450E-03	3.53875101E-01	4.51630845E-03
1.50000000E+03	1.83593535E+07	-6.49301200E+04	4.31442056E-03	5.81943246E-01	4.60299887E-03
1.55000000E+03	1.51879746E+07	-6.17473959E+04	4.41272481E-03	8.17377220E-01	5.03019877E-03
1.60000000E+03	1.21877208E+07	-5.90067326E+04	4.55667912E-03	1.07174623E+00	5.14674644E-03
1.65000000E+03	9.27549255E+06	-5.72007069E+04	4.66956463E-03	1.33165239E+00	5.24157170E-03
1.68000000E+03	7.60109984E+06	-5.38169453E+04	4.72280597E-03	1.48930830E+00	5.26097542E-03
1.70000000E+03	6.56603151E+06	-4.93742283E+04	4.75260040E-03	1.59442029E+00	5.24634268E-03
1.74400000E+03	4.73017772E+06	-3.26359645E+04	4.85091093E-03	1.83627879E+00	5.38970715E-03
1.75000000E+03	4.54169142E+06	-3.02256582E+04	4.86203428E-03	1.86852764E+00	5.36039633E-03
1.80000000E+03	3.38519837E+06	-1.87671493E+04	4.94034130E-03	2.13265781E+00	5.24649382E-03
1.85000000E+03	2.52136418E+06	-1.57274562E+04	4.99915362E-03	2.39523707E+00	5.25302700E-03
1.90000000E+03	1.81832923E+06	-1.23352229E+04	5.04226786E-03	2.65762289E+00	5.23931615E-03
1.95000000E+03	1.29370321E+06	-8.59135015E+03	5.07307620E-03	2.91889018E+00	5.20890782E-03
2.00000000E+03	8.8882954E+05	-7.58715575E+03	5.09481838E-03	3.17948962E+00	5.21355321E-03
2.05000000E+03	5.36418354E+05	-6.49712320E+03	5.10898055E-03	3.44010270E+00	5.20963312E-03
2.08000000E+03	3.51855508E+05	-5.80192224E+03	5.11428934E-03	3.59630806E+00	5.20363215E-03
2.10000000E+03	2.73390466E+05	-3.68141892E+03	5.11678388E-03	3.69982575E+00	5.17324736E-03
2.12000000E+03	2.04681417E+05	-3.18721572E+03	5.11868958E-03	3.80323317E+00	5.16737910E-03
2.20000000E+03	4.81801678E+04	-8.81802249E+02	5.12228463E-03	4.21528095E+00	5.13554482E-03
2.25000000E+03	1.36241219E+04	-4.96635658E+02	5.12360756E-03	4.47268797E+00	5.14843934E-03
2.30000000E+03	-2.23155026E-28	-1.32616829E-10	5.12397957E-03	4.72987390E+00	5.12397957E-03

Saturn 1B/Centaur

t = 60

Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.81373866E+01	7.91712527E+02	2.34254534E+03	2.34254534E+03	2.34254534E+03	0.

STATION IN	M/Q LB. IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-7.85184325E-03	2.43437087E+00	-7.85184325E-03
5.00000000E+01	5.62473476E+05	3.27565946E+04	-7.84898338E-03	2.04018867E+00	-7.94341504E-03
1.00000000E+02	4.08346961E+06	1.11556200E+05	-7.80926475E-03	1.63823524E+00	-8.13377961E-03
1.50000000E+02	1.12298867E+07	1.67970933E+05	-7.66081386E-03	1.22999589E+00	-8.15391132E-03
2.00000000E+02	2.03579900E+07	1.93740890E+05	-7.34702393E-03	8.27115234E-01	-7.92102681E-03
2.50000000E+02	3.05140089E+07	2.11756643E+05	-6.83981665E-03	4.41366089E-01	-7.47304603E-03
3.00000000E+02	4.18003580E+07	2.36854638E+05	-6.11875727E-03	8.25490553E-02	-6.83370601E-03
3.50000000E+02	5.35421195E+07	2.25075760E+05	-5.16434307E-03	-2.36118421E-01	-5.85019318E-03
4.00000000E+02	6.36000550E+07	1.70915599E+05	-3.98839748E-03	-4.96565463E-01	-4.51420754E-03
4.50000000E+02	7.00440482E+07	8.2244145E+04	-2.64455273E-03	-6.82836766E-01	-2.89996082E-03
5.00000000E+02	7.14640480E+07	-2.79325303E+04	-1.22027817E-03	-7.83994956E-01	-1.13266456E-03
5.50000000E+02	6.71104579E+07	-1.46507608E+05	1.75361884E-04	-7.96016977E-01	6.39439323E-04
6.00000000E+02	5.68915980E+07	-2.60423704E+05	1.42488784E-03	-7.22613299E-01	2.25803584E-03
6.50000000E+02	4.21896417E+07	-3.02910011E+05	2.41880230E-03	-5.78008015E-01	3.39763814E-03
7.00000000E+02	2.70109365E+07	-3.04157438E+05	3.11091213E-03	-3.89202161E-01	4.10378439E-03
7.50000000E+02	1.17826344E+07	-3.04882059E+05	3.49890827E-03	-1.72722439E-01	4.50438150E-03
8.00000000E+02	-3.46767706E+06	-3.05032530E+05	3.58207039E-03	5.61274886E-02	4.59849330E-03
8.50000000E+02	-1.87108251E+07	-3.04596788E+05	3.36024902E-03	2.82014344E-01	4.38587769E-03
9.00000000E+02	-3.39180167E+07	-3.03602085E+05	2.83387764E-03	4.89610567E-01	3.86700536E-03
9.48000000E+02	-4.34585053E+07	-3.02182668E+05	2.04295393E-03	6.57504652E-01	3.08183509E-03
9.62000000E+02	-5.26856879E+07	-3.01695638E+05	1.75974701E-03	6.98705761E-01	2.80007679E-03
1.00000000E+03	-6.40482862E+07	-2.97179993E+05	1.57603809E-03	8.04316528E-01	2.75790665E-03
1.05000000E+03	-7.38010832E+07	-2.91727112E+05	1.21943804E-03	9.40354356E-01	2.67280777E-03
1.10000000E+03	-9.31255001E+07	-2.82361204E+05	6.61804673E-04	1.07064943E+00	2.54421270E-03
1.15000000E+03	-1.07172416E+08	-2.79469088E+05	-9.12856547E-05	1.17899858E+00	1.77184160E-03
1.15500000E+03	-1.08560670E+08	-2.75828419E+05	-1.72389459E-04	1.18759486E+00	1.66646667E-03
1.18600000E+03	-1.16558782E+08	-2.23341767E+05	-6.77419545E-04	1.22581985E+00	5.29833249E-04
1.20000000E+03	-1.19352405E+08	-1.75720123E+05	-8.77680854E-04	1.23004035E+00	7.21576473E-05
1.25000000E+03	-1.22479859E+08	5.00036775E+04	-1.66394916E-03	1.18445488E+00	-1.94968446E-03
1.28000000E+03	-1.19531395E+08	1.45538403E+05	-2.13328230E-03	1.11061951E+00	-2.96493032E-03
1.30000000E+03	-1.16298260E+08	1.77483197E+05	-2.36014391E-03	1.05130541E+00	-3.14895812E-03

1.35000000E+03	-1.06964373E+08	1.95339591E+05	-2.89719078E-03	8.78201082E-01	-3.76536674E-03
1.40000000E+03	-9.68221772E+07	2.09725422E+05	-3.38735060E-03	6.75807906E-01	-4.31946358E-03
1.45000000E+03	-8.60582267E+07	2.20129708E+05	-3.82717548E-03	4.47389297E-01	-4.80552974E-03
1.50000000E+03	-7.48830764E+07	2.26104165E+05	-4.21417339E-03	1.96464320E-01	-5.21908079E-03
1.55000000E+03	-6.35281180E+07	2.27243556E+05	-4.62087451E-03	-8.62600302E-02	-6.89331007E-03
1.60000000E+03	-5.22380311E+07	2.24677651E+05	-5.23004233E-03	-4.45928847E-01	-7.47681884E-03
1.65000000E+03	-4.10819946E+07	2.20710275E+05	-5.72102905E-03	-8.31755442E-01	-7.92813180E-03
1.68000000E+03	-3.45727294E+07	2.11363454E+05	-5.95979277E-03	-1.07216316E+00	-8.07342731E-03
1.70000000E+03	-3.04690700E+07	1.97886115E+05	-6.09662868E-03	-1.23379270E+00	-8.07548984E-03
1.74400000E+03	-2.28814297E+07	1.40846252E+05	-6.56238305E-03	-1.63867711E+00	-8.88765301E-03
1.75000000E+03	-2.20029586E+07	1.32075903E+05	-6.61630579E-03	-1.69171793E+00	-8.79397937E-03
1.80000000E+03	-1.67972672E+07	8.84038558E+04	-7.00122268E-03	-2.11898303E+00	-8.44337367E-03
1.85000000E+03	-1.26841929E+07	7.57345013E+04	-7.29498152E-03	-2.54348426E+00	-8.51749163E-03
1.90000000E+03	-9.26237314E+06	6.07528247E+04	-7.51319869E-03	-2.96893193E+00	-8.48369110E-03
1.95000000E+03	-6.64731694E+06	4.34676467E+04	-7.67085512E-03	-3.39032181E+00	-8.35809064E-03
2.00000000E+03	-4.59158271E+06	3.86686472E+04	-7.78284420E-03	-3.80917470E+00	-8.38798735E-03
2.05000000E+03	-2.78976881E+06	3.33107604E+04	-7.85621123E-03	-4.22835974E+00	-8.37225709E-03
2.08000000E+03	-1.84218488E+06	2.98280701E+04	-7.88389847E-03	-4.47912630E+00	-8.34321584E-03
2.10000000E+03	-1.43512767E+06	1.91273080E+04	-7.89697512E-03	-4.64319640E+00	-8.19033874E-03
2.12000000E+03	-1.07703359E+06	1.66075678E+04	-7.90699257E-03	-4.80671323E+00	-8.16069816E-03
2.20000000E+03	-2.56481759E+05	4.67733375E+03	-7.92600346E-03	-5.45267178E+00	-7.99633930E-03
2.25000000E+03	-7.27499365E+04	2.64781958E+03	-7.93305573E-03	-5.85584761E+00	-8.06544671E-03
2.30000000E+03	4.91617282E-28	8.99696454E-10	-7.93504397E-03	-6.25787149E+00	-7.93504397E-03

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Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.39285774E+01	4.08686301E+03	2.34254534E+03	2.34254534E+03	2.34254534E+03	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PR. 1/IN
0.	0.	0.		-1.48987921E-02	3.34432629E+00	-1.48987921E-02	
5.00000000E+01	3.85312943E+06	2.21344925E+05		-1.48790563E-02	2.58849704E+00	-1.55171559E-02	
1.00000000E+02	2.67134016E+07	7.02793699E+05		-1.46146769E-02	1.78299803E+00	-1.66590903E-02	
1.50000000E+02	7.00051245E+07	9.82713566E+05		-1.36706187E-02	9.45703562E-01	-1.65554843E-02	
2.00000000E+02	1.21514901E+08	1.05542689E+06		-1.17612371E-02	1.53690195E-01	-1.48881871E-02	
2.50000000E+02	1.73939365E+08	1.02293421E+06		-8.80407114E-03	-5.20855250E-01	-1.18630165E-02	
3.00000000E+02	2.16516173E+08	5.73141275E+05		-4.86332771E-03	-9.94002354E-01	-6.59336194E-03	
3.50000000E+02	2.24959146E+08	-2.55158420E+05		-3.79270167E-04	-1.15128187E+00	3.98247729E-04	
4.00000000E+02	1.91241632E+08	-1.06926949E+06		-3.85084149E-03	-9.58338736E-01	7.14037538E-03	
4.50000000E+02	1.22128624E+08	-1.63214891E+06		7.03163815E-03	-4.66778122E-01	1.21014710E-02	
5.00000000E+02	3.56738588E+07	-1.74026252E+06		8.61873513E-03	2.01584748E-01	1.40772697E-02	
5.50000000E+02	-4.29582718E+07	-1.31901924E+06		8.51031442E-03	8.84318737E-01	1.26884392E-02	
6.00000000E+02	-8.82001893E+07	-4.20005456E+05		7.12322945E-03	1.42271958E+00	8.46691168E-03	
6.50000000E+02	-9.06565968E+07	5.37904395E+04		5.29927237E-03	1.74119048E+00	5.12545173E-03	
7.00000000E+02	-8.73653020E+07	7.83232520E+04		3.51700769E-03	1.95063040E+00	3.26133423E-03	
7.50000000E+02	-8.27882658E+07	1.05018033E+05		1.81324621E-03	2.06848411E+00	1.46690632E-03	
8.00000000E+02	-7.68472673E+07	1.32689023E+05		2.14583804E-04	2.09898652E+00	-2.27559738E-04	
8.50000000E+02	-6.95218036E+07	1.60216663E+05		-1.25140194E-03	2.04791409E+00	-1.79087842E-03	
9.00000000E+02	-6.08452665E+07	1.86568160E+05		-2.55726956E-03	1.92260041E+00	-3.19214246E-03	
9.48000000E+02	-5.13208092E+07	2.09898719E+05		-3.63585629E-03	1.74065353E+00	-4.35747221E-03	
9.62000000E+02	-4.83376116E+07	2.16233376E+05		-3.91494124E-03	1.67750695E+00	-4.66057358E-03	
1.00000000E+03	-3.89535443E+07	2.66726927E+05		-4.05214608E-03	1.49128856E+00	-5.11290447E-03	
1.05000000E+03	-2.47375859E+07	3.09040632E+05		-4.21000609E-03	1.22126761E+00	-5.74963089E-03	
1.10000000E+03	-7.73809159E+06	3.61936329E+05		-4.31367775E-03	9.09823975E-01	-6.72658661E-03	
1.15000000E+03	1.06225149E+07	3.71741263E+05		-4.30314123E-03	5.71424162E-01	-6.78141632E-03	
1.15500000E+03	1.25034594E+07	3.80546461E+05		-4.29445001E-03	5.37389965E-01	-6.83142642E-03	
1.18600000E+03	2.53383596E+07	4.68828593E+05		-4.21146065E-03	3.23319983E-01	-6.74566926E-03	
1.20000000E+03	3.23102556E+07	5.23948497E+05		-4.16265563E-03	2.27001484E-01	-6.99480966E-03	
1.25000000E+03	6.09691204E+07	5.65676320E+05		-3.86288481E-03	-1.38179321E-01	-7.09532093E-03	
1.28000000E+03	7.66048748E+07	4.62329627E+05		-3.59561229E-03	-3.39554965E-01	-6.23749587E-03	
1.30000000E+03	8.52772977E+07	4.02148950E+05		-3.43976373E-03	-4.48480528E-01	-5.22709240E-03	

1.35000000E+03	1.04115164E+08	3.47477878E+05	-2.98339735E-03	-6.93161054E-01	-4.52774348E-03
1.40000000E+03	1.19666228E+08	2.71305617E+05	-2.44393435E-03	-6.98271944E-01	-3.64973709E-03
1.45000000E+03	1.30956447E+08	1.77800774E+05	-1.83960166E-03	-1.05576545E+00	-2.62982733E-03
1.50000000E+03	1.37237848E+08	7.18052104E+04	-1.19277918E-03	-1.15961825E+00	-1.51191345E-03
1.55000000E+03	1.38017151E+08	-4.13555012E+04	-3.70793451E-04	-1.20368698E+00	4.27615609E-05
1.60000000E+03	1.33490541E+08	-1.16706359E+05	1.06167340E-03	-1.14094415E+00	2.22873699E-03
1.65000000E+03	1.26913191E+08	-1.49634648E+05	2.43367045E-03	-9.87499096E-01	3.93001693E-03
1.68000000E+03	1.21839614E+08	-1.94931148E+05	3.21992552E-03	-8.51879035E-01	5.16923700E-03
1.70000000E+03	1.17481382E+08	-2.42617407E+05	3.72409464E-03	-7.38825787E-01	6.15026871E-03
1.74400000E+03	1.04302377E+08	-3.49350598E+05	5.68288043E-03	-3.12473588E-01	1.14504067E-02
1.75000000E+03	1.02182243E+08	-3.56919326E+05	5.93067103E-03	-2.42651119E-01	1.18155734E-02
1.80000000E+03	8.40337238E+07	-3.58295202E+05	7.79259989E-03	3.99589416E-01	1.36375461E-02
1.85000000E+03	6.65625049E+07	-3.37221097E+05	9.29680750E-03	1.11180785E+00	1.47402473E-02
1.90000000E+03	5.06555213E+07	-2.95545247E+05	1.04655153E-02	1.86265532E+00	1.51866854E-02
1.95000000E+03	3.73623735E+07	-2.32636482E+05	1.13404515E-02	2.62021211E+00	1.50184986E-02
2.00000000E+03	2.62246865E+07	-2.12000203E+05	1.19746025E-02	3.37922195E+00	1.52922895E-02
2.05000000E+03	1.62499763E+07	-1.86110032E+05	1.23971916E-02	4.14467547E+00	1.52803834E-02
2.08000000E+03	1.09328379E+07	-1.68051623E+05	1.25597467E-02	4.60131780E+00	1.51475450E-02
2.10000000E+03	8.57783176E+06	-1.11141332E+05	1.26376143E-02	4.88951607E+00	1.43422360E-02
2.12000000E+03	6.49222965E+06	-9.72880042E+04	1.26977099E-02	5.17482266E+00	1.41839305E-02
2.20000000E+03	1.59011798E+06	-2.87312145E+04	1.28135678E-02	6.27072180E+00	1.32456162E-02
2.25000000E+03	4.54564616E+05	-1.64799269E+04	1.28574460E-02	6.95392655E+00	1.36814423E-02
2.30000000E+03	0.	1.56141281E-08	1.28698963E-02	7.63038582E+00	1.28698963E-02

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Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION	
7.29049074E+01	5.31512552E+03	2.34254534E+03	2.34254534E+03	2.34254534E+03	0.		
STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PR. 1/IN
0.	0.	0.		-8.09404377E-03	1.69684475E+00	-8.09404377E-03	
5.00000000E+01	2.51943847E+C6	1.44186441E+05		-8.08111346E-03	1.28502264E+00	-8.49677829E-03	
1.00000000E+02	1.72391781E+07	4.48375183E+05		-7.90963361E-03	8.41368121E-01	-9.21394848E-03	
1.50000000E+02	4.45126106E+07	6.11872660E+05		-7.30559615E-03	3.78987308E-01	-9.10181677E-03	
2.00000000E+02	7.61820818E+07	6.40639139E+05		-6.10091775E-03	-5.22198789E-02	-7.99896164E-03	
2.50000000E+02	1.07361335E+08	5.92209107E+05		-4.26150137E-03	-4.06682888E-01	-6.03242198E-03	
3.00000000E+02	1.29172742E+08	1.98282777E+05		-1.86436107E-03	-6.27169640E-01	-2.46288015E-03	
3.50000000E+02	1.23213778E+08	-4.38273158E+05		7.12782498E-04	-6.37312749E-01	2.04828702E-03	
4.00000000E+02	8.69859461E+C7	-9.77560831E+05		2.85990862E-03	-4.33977596E-01	5.86730715E-03	
4.50000000E+02	3.00004431E+C7	-1.24275930E+06		4.05196517E-03	-8.02212414E-02	7.91226367E-03	
5.00000000E+02	-3.08059391E+C7	-1.12318103E+06		4.03391017E-03	3.16797907E-01	7.55689731E-03	
5.50000000E+02	-7.61233207E+C7	-6.35991048E+05		2.92386753E-03	6.37314618E-01	4.93843252E-03	
6.00000000E+02	-9.03541102E+07	9.16942892E+04		1.19823497E-03	7.86764983E-01	9.04886433E-04	
6.50000000E+02	-7.36303667E+07	4.15128392E+05		-4.59452493E-04	7.47958905E-01	-1.80091542E-03	
7.00000000E+02	-5.19675852E+07	4.27025197E+05		-1.71042454E-03	6.23546592E-01	-3.10437852E-03	
7.50000000E+02	-3.03720757E+07	4.36281514E+05		-2.53459324E-03	4.44763779E-01	-3.97340989E-03	
8.00000000E+02	-8.39611908E+06	4.42150307E+05		-2.92276458E-03	2.33647512E-01	-4.39608843E-03	
8.50000000E+02	1.37802121E+07	4.44268346E+05		-2.86910007E-03	1.27202412E-02	-4.36502639E-03	
9.00000000E+02	3.59684197E+07	4.42662536E+05		-2.37147945E-03	-1.95249662E-01	-3.87781606E-03	
9.48000000E+02	5.71154007E+C7	4.38002972E+05		-1.47751623E-03	-3.61579239E-01	-2.98333733E-03	
9.62000000E+02	6.32347871E+07	4.36163438E+05		-1.14052370E-03	-4.01015103E-01	-2.64453555E-03	
1.00000000E+03	7.94055540E+07	4.18129392E+05		-9.15821385E-04	-5.00148525E-01	-2.57869908E-03	
1.05000000E+03	9.98540124E+07	3.94320425E+05		-4.67797250E-04	-6.26317348E-01	-2.43228168E-03	
1.10000000E+03	1.18381524E+08	3.51645557E+05		2.41003162E-04	-7.39432050E-01	-2.10330055E-03	
1.15000000E+03	1.35632333E+08	3.38158189E+05		1.19636537E-03	-8.19043696E-01	-1.05802255E-03	
1.15500000E+03	1.37280745E+08	3.21190214E+05		1.29896959E-03	-8.23795288E-01	-8.42298506E-04	
1.18600000E+03	1.44691286E+08	8.10577294E+04		1.93364683E-03	-8.21908407E-01	1.49549694E-03	
1.20000000E+03	1.44344485E+08	-1.29271161E+05		2.17930486E-03	-7.91242466E-01	2.87806789E-03	
1.25000000E+03	1.15664519E+08	-9.60883702E+05		3.04086475E-03	-4.96075000E-01	8.53162876E-03	
1.28000000E+03	8.34414700E+C7	-1.16117623E+06		3.42816434E-03	-2.14596326E-01	1.00634571E-02	
1.30000000E+03	5.99071266E+07	-1.18649813E+06		3.56608022E-03	-3.99815458E-02	8.83940526E-03	

1.35000000E+03	9.17477126E+05	-1.16388334E+06	3.71184015E-03	4.05325062E-01	8.88465500E-03
1.40000000E+03	-5.55662562E+07	-1.08648622E+06	3.57892163E-03	8.39765080E-01	8.40774926E-03
1.45000000E+03	-1.06865285E+08	-9.57245488E+05	3.18587063E-03	1.23790881E+00	7.44029502E-03
1.50000000E+03	-1.50524570E+08	-7.82126120E+05	2.56363476E-03	1.57656281E+00	6.03975085E-03
1.55000000E+03	-1.84454548E+08	-5.69360375E+05	1.54651453E-03	1.86785470E+00	7.24011828E-03
1.60000000E+03	-2.07698818E+08	-4.06910780E+05	-5.25014349E-04	2.12684141E+00	3.54409345E-03
1.65000000E+03	-2.26115217E+08	-3.18312692E+05	-2.81213098E-03	2.22838638E+00	3.70995938E-04
1.68000000E+03	-2.33859273E+08	-1.74941999E+05	-4.26694686E-03	2.19976235E+00	-2.51752688E-03
1.70000000E+03	-2.35758158E+08	-5.84680600E+03	-5.25680112E-03	2.12352636E+00	-5.19833306E-03
1.74400000E+03	-2.25186659E+08	4.97187985E+05	-9.34631794E-03	1.62651706E+00	-1.75545327E-02
1.75000000E+03	-2.22031908E+08	5.52830123E+05	-9.88304692E-03	1.51677663E+00	-1.89981355E-02
1.80000000E+03	-1.88237336E+08	7.29566184E+05	-1.39996835E-02	3.62751468E-01	-2.59012526E-02
1.85000000E+03	-1.51835460E+08	7.18118028E+05	-1.73994630E-02	-1.01597675E+00	-2.89913601E-02
1.90000000E+03	-1.17304840E+08	6.54011665E+05	-2.00855263E-02	-2.51051775E+00	-3.05329970E-02
1.95000000E+03	-8.73605481E+07	5.34427470E+05	-2.21222146E-02	-4.04416831E+00	-3.05716607E-02
2.00000000E+03	-6.16589866E+07	4.91322569E+05	-2.36088181E-02	-5.59389056E+00	-3.12977472E-02
2.05000000E+03	-3.84614819E+07	4.34237219E+05	-2.46052657E-02	-7.16240828E+00	-3.13324108E-02
2.08000000E+03	-2.60365168E+07	3.93255904E+05	-2.49910242E-02	-8.09864162E+00	-3.10467049E-02
2.10000000E+03	-2.04751970E+07	2.62842163E+05	-2.51766685E-02	-8.68586257E+00	-2.92079900E-02
2.12000000E+03	-1.55362711E+07	2.30704043E+05	-2.53202859E-02	-9.26650095E+00	-2.88446373E-02
2.20000000E+03	-3.83961622E+06	6.91773878E+04	-2.55985542E-02	-1.14832749E+01	-2.66388157E-02
2.25000000E+03	-1.10026033E+06	3.98415541E+04	-2.57046219E-02	-1.28658148E+01	-2.76966996E-02
2.30000000E+03	2.94355642E-18	-3.52490173E-06	-2.57347775E-02	-1.42323618E+01	-2.57347775E-02

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Mode 5

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.12314579E+02	1.26145647E+04	2.34254534E+03	2.34254534E+03	2.34254534E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-7.01243520E-03	1.18025884E+00	-7.01243520E-03
5.00000000E+01	4.01526690E+06	2.26303914E+05	-6.99166386E-03	8.18292975E-01	-7.64405932E-03
1.00000000E+02	2.59789292E+07	6.40801454E+05	-6.72744482E-03	4.09829588E-01	-8.59152404E-03
1.50000000E+02	6.25733344E+07	7.70912856E+05	-5.85243491E-03	-1.46848844E-02	-8.11553581E-03
2.00000000E+02	9.97185602E+07	6.95006837E+05	-4.22316769E-03	-3.79213806E-01	-6.28228865E-03
2.50000000E+02	1.29273096E+08	4.53945461E+05	-1.91320819E-03	-6.23037900E-01	-3.27067021E-03
3.00000000E+02	1.27855743E+08	-6.76976410E+05	7.50172223E-04	-6.47689241E-01	-2.79363412E-03
3.50000000E+02	6.07568445E+07	-1.89140138E+06	2.73815078E-03	-3.51204296E-01	8.50162283E-03
4.00000000E+02	-4.52570661E+07	-2.16569951E+06	2.91565354E-03	1.23783933E-01	9.57827882E-03
4.50000000E+02	-1.37484959E+08	-1.36628509E+06	1.02059657E-03	5.14797043E-01	5.26459480E-03
5.00000000E+02	-1.71846388E+08	2.39218751E+04	-2.18953652E-03	5.95518597E-01	-2.26457025E-03
5.50000000E+02	-1.39485771E+08	1.15336888E+06	-5.39778749E-03	3.00946786E-01	-9.05119829E-03
6.00000000E+02	-7.39517690E+07	1.25430516E+06	-7.54080190E-03	-2.36679852E-01	-1.15535773E-02
6.50000000E+02	-2.44013930E+07	9.06094586E+05	-8.49647887E-03	-8.00908736E-01	-1.14244701E-02
7.00000000E+02	1.98899936E+07	8.61652877E+05	-8.53788897E-03	-1.37430506E+00	-1.13506140E-02
7.50000000E+02	6.13790318E+07	7.94187336E+05	-7.71957418E-03	-1.92031902E+00	-1.03387316E-02
8.00000000E+02	9.89581928E+07	7.05752523E+05	-6.10882813E-03	-2.39372337E+00	-8.46052168E-03
8.50000000E+02	1.31667525E+08	6.00167874E+05	-3.79376638E-03	-2.75356293E+00	-5.81463265E-03
9.00000000E+02	1.58778093E+08	4.82816926E+05	-8.79523755E-04	-2.96440583E+00	-2.52250176E-03
9.48000000E+02	1.79138475E+08	3.65299975E+05	2.37350683E-03	-2.99973713E+00	1.11763315E-03
9.62000000E+02	1.84013018E+08	3.31108249E+05	3.39055430E-03	-2.97620365E+00	2.24880172E-03
1.00000000E+03	1.90054491E+08	4.60945310E+04	3.98101373E-03	-2.85830823E+00	3.79769830E-03
1.05000000E+03	1.86917218E+08	-2.21139847E+05	4.92334658E-03	-2.62147020E+00	6.02505413E-03
1.10000000E+03	1.65204460E+08	-5.90282041E+05	6.06750080E-03	-2.22003821E+00	1.00027144E-02
1.15000000E+03	1.33600943E+08	-6.70158621E+05	7.19333308E-03	-1.67683672E+00	1.16610572E-02
1.15500000E+03	1.30047067E+08	-7.50902368E+05	7.29247416E-03	-1.61692859E+00	1.22984899E-02
1.18600000E+03	9.63814323E+07	-1.66798374E+06	7.81307392E-03	-1.16915847E+00	1.68292022E-02
1.20000000E+03	6.83347682E+07	-2.31179537E+06	7.95410135E-03	-9.07129424E-01	2.04502926E-02
1.25000000E+03	-8.40509793E+07	-3.16975420E+06	7.92701052E-03	3.64846266E-01	2.60398917E-02
1.28000000E+03	-1.66928728E+08	-2.20046481E+06	7.43184704E-03	1.06961470E+00	2.00059317E-02
1.30000000E+03	-2.05384551E+08	-1.62044031E+06	7.07199987E-03	1.38569026E+00	1.42739568E-02

1.35000000E+03	-2.74561496E+08	-1.11555622E+06	5.90815637E-03	2.01903528E+00	1.08661840E-02
1.40000000E+03	-3.14288276E+08	-4.52068952E+05	4.47934451E-03	2.45608359E+00	6.48853985E-03
1.45000000E+03	-3.18184210E+08	3.06188120E+05	2.94377019E-03	2.65905540E+00	1.58293410E-03
1.50000000E+03	-2.83281740E+08	1.08768742E+06	1.48226536E-03	2.61388475E+00	-3.35190097E-03
1.55000000E+03	-2.10240627E+08	1.81763445E+06	3.06399387E-05	2.23337703E+00	-1.81457046E-02
1.60000000E+03	-1.06882668E+08	2.18485375E+06	-1.65498965E-03	1.15462278E+00	-2.35035271E-02
1.65000000E+03	3.83190426E+06	2.23088812E+06	-2.19951466E-03	-5.37438098E-02	-2.45083958E-02
1.68000000E+03	7.00933936E+07	2.15755513E+06	-1.96498745E-03	-7.79872471E-01	-2.35405387E-02
1.70000000E+03	1.11598132E+08	1.96792443E+06	-1.58116720E-03	-1.23067100E+00	-2.12604115E-02
1.74400000E+03	1.76126923E+08	7.81333879E+05	1.02867656E-03	-2.31811445E+00	-1.18705818E-02
1.75000000E+03	1.80216044E+08	5.84124108E+05	1.45652462E-03	-2.37813087E+00	-8.17454063E-03
1.80000000E+03	1.80957317E+08	-3.17799094E+05	5.14345606E-03	-2.22593038E+00	1.03277806E-02
1.85000000E+03	1.60679184E+08	-4.83590534E+05	8.57366371E-03	-1.55236781E+00	1.63798063E-02
1.90000000E+03	1.33774555E+08	-5.79056796E+05	1.15261755E-02	-6.15658963E-01	2.07762841E-02
1.95000000E+03	1.04265857E+08	-5.85290021E+05	1.39071087E-02	4.91587418E-01	2.31607058E-02
2.00000000E+03	7.54710351E+07	-5.62267888E+05	1.57025604E-02	1.68717621E+00	2.45017449E-02
2.05000000E+03	4.84719818E+07	-5.13306823E+05	1.69379108E-02	2.92585732E+00	2.48899917E-02
2.08000000E+03	3.36796815E+07	-4.71265426E+05	1.74295595E-02	3.67029369E+00	2.46864955E-02
2.10000000E+03	2.67378018E+07	-3.30175530E+05	1.76707855E-02	4.12807641E+00	2.27348274E-02
2.12000000E+03	2.34978776E+07	-2.93178621E+05	1.78592350E-02	4.57897753E+00	2.23379796E-02
2.20000000E+03	5.24847075E+06	-9.35030728E+04	1.82317471E-02	6.25730642E+00	1.96378083E-02
2.25000000E+03	1.51794135E+06	-5.47157612E+04	1.83773508E-02	7.30875888E+00	2.11131388E-02
2.30000000E+03	1.24964766E-22	-1.16411016E-04	1.84190590E-02	8.33991395E+00	1.84190590E-02

\$AS001

CASE IV 80 SECOND BURN

N=+5,WOSQ=0.,DWOS=10.,H=0.,

CODEI=1,CODEII=1,P=0.,

ACC=0.,

OUTST=0.,50.,100.,150.,200.,250.,300.,

350.,400.,450.,500.,550.,600.,650.,700.,

750.,800.,850.,900.,948.,962.,1000.,

1050.,1100.,1150.,1155.,1186.,1200.,1250.,

1280.,1300.,1350.,1400.,1450.,1500.,1550.,

1600.,1650.,1680.,1700.,1744.,1750.,1800.,

1850.,1900.,1950.,2000.,2050.,2080.,2100.,

2120.,2200.,2250.,2300.,

RHDAC=2080.,900.,2120.,100.,

\$END

Saturn 1B/Centaur

t = 80
Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.53575975E+01	2.35855802E+02	2.01029145E+03	2.01029145E+03	2.01029145E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-7.42875524E-03	2.64494540E+00	-7.42875524E-03
5.00000000E+01	1.84140389E+05	1.07698002E+04	-7.42782118E-03	2.27298706E+00	-7.45886868E-03
1.00000000E+02	1.35549038E+06	3.74232436E+04	-7.41470352E-03	1.89843180E+00	-7.52356702E-03
1.50000000E+02	3.77746188E+06	5.74203645E+04	-7.36503533E-03	1.52165603E+00	-7.53359923E-03
2.00000000E+02	6.92491889E+06	6.73489166E+04	-7.25881733E-03	1.14651366E+00	-7.45835431E-03
2.50000000E+02	1.04983364E+07	7.55634272E+04	-7.08527270E-03	7.76976356E-01	-7.31123483E-03
3.00000000E+02	1.47154955E+07	9.37830382E+04	-6.83462565E-03	4.15955938E-01	-7.11771095E-03
3.50000000E+02	1.97283143E+07	1.04207319E+05	-6.49105550E-03	6.71912185E-02	-6.80859570E-03
4.00000000E+02	2.48903389E+07	9.98896610E+04	-6.04450809E-03	-2.62433172E-01	-6.35181175E-03
4.50000000E+02	2.94795133E+07	8.14383891E+04	-5.49927053E-03	-5.65594908E-01	-5.75223705E-03
5.00000000E+02	3.28220436E+07	5.02686453E+04	-4.87365578E-03	-8.35626565E-01	-5.03132920E-03
5.50000000E+02	3.44965567E+07	2.58016619E+04	-4.19823510E-03	-1.06783337E+00	-4.27996444E-03
6.00000000E+02	3.57649433E+07	2.49087905E+04	-3.49554567E-03	-1.26432119E+00	-3.57523392E-03
6.50000000E+02	3.69851609E+07	2.38794651E+04	-2.76795882E-03	-1.42493368E+00	-2.84512390E-03
7.00000000E+02	3.81510797E+07	2.27415642E+04	-2.01650156E-03	-1.54842891E+00	-2.09073768E-03
7.50000000E+02	3.92579873E+07	2.15238934E+04	-1.24230938E-03	-1.63362310E+00	-1.31329322E-03
8.00000000E+02	4.03026338E+07	2.02561383E+04	-4.46597495E-04	-1.67939563E+00	-5.14094568E-04
8.50000000E+02	4.12832746E+07	1.89688154E+04	3.69368899E-04	-1.68469264E+00	3.05497704E-04
9.00000000E+02	4.21997104E+07	1.76932196E+04	1.20430508E-03	-1.64852908E+00	1.14409681E-03
9.48000000E+02	4.30203545E+07	1.65093978E+04	2.02250865E-03	-1.57395530E+00	1.96575059E-03
9.82000000E+02	4.32491440E+07	1.61758571E+04	2.26406542E-03	-1.54473852E+00	2.20828661E-03
1.00000000E+03	4.38007702E+07	1.34328998E+04	2.40075297E-03	-1.45821101E+00	2.34733107E-03
1.05000000E+03	4.44206842E+07	1.08928318E+04	2.62016260E-03	-1.33565277E+00	2.56589506E-03
1.10000000E+03	4.48626669E+07	7.31616190E+03	2.90859149E-03	-1.20031342E+00	2.85981708E-03
1.15000000E+03	4.52064930E+07	6.45618027E+03	3.24722430E-03	-1.04872096E+00	3.20418310E-03
1.15500000E+03	4.52363832E+07	5.50236029E+03	3.28122568E-03	-1.03259912E+00	3.24454328E-03
1.18600000E+03	4.52726577E+07	-6.90143706E+03	3.48440233E-03	-9.27909962E-01	3.52170739E-03
1.20000000E+03	4.51023678E+07	-1.73289946E+04	3.56110481E-03	-8.77670591E-01	3.65477505E-03
1.25000000E+03	4.31153971E+07	-6.05337004E+04	3.84685704E-03	-6.81063840E-01	4.19276390E-03
1.28000000E+03	4.10623809E+07	-7.57995350E+04	4.00992949E-03	-5.51460661E-01	4.44306969E-03
1.30000000E+03	3.95004330E+07	-8.02663397E+04	4.08740804E-03	-4.63540293E-01	4.44414733E-03

1.35000000E+03	3.54336838E+07	-8.21955323E+04	4.26757679E-03	-2.36509750E-01	4.63289027E-03
1.40000000E+03	3.13021053E+07	-8.28514409E+04	4.42801251E-03	-6.74665698E-04	4.79624114E-03
1.45000000E+03	2.71705137E+07	-8.21891587E+04	4.56855843E-03	2.42685018E-01	4.93384358E-03
1.50000000E+03	2.31057940E+07	-8.01708505E+04	4.68937452E-03	4.92280205E-01	5.04568941E-03
1.55000000E+03	1.91765539E+07	-7.67633520E+04	4.81331978E-03	7.51229868E-01	5.58095330E-03
1.60000000E+03	1.54364927E+07	-7.36638344E+04	4.99534827E-03	1.03401098E+00	5.73198661E-03
1.65000000E+03	1.17982187E+07	-7.15234473E+04	5.13859557E-03	1.32390195E+00	5.85383005E-03
1.68000000E+03	9.70270353E+06	-6.74341559E+04	5.20642902E-03	1.50006554E+00	5.88077058E-03
1.70000000E+03	8.40428557E+06	-6.20162918E+04	5.24451106E-03	1.61756820E+00	5.86467398E-03
1.74400000E+03	6.08977149E+06	-4.13693777E+04	5.37070690E-03	1.88965740E+00	6.05368546E-03
1.75000000E+03	5.85065607E+06	-3.83757841E+04	5.38503182E-03	1.92587002E+00	6.01777352E-03
1.80000000E+03	4.37428205E+06	-2.40700369E+04	5.48607958E-03	2.22199327E+00	5.87873923E-03
1.85000000E+03	3.26469687E+06	-2.02339411E+04	5.56214969E-03	2.51629983E+00	5.88876698E-03
1.90000000E+03	2.35883223E+06	-1.59212642E+04	5.61802559E-03	2.81042907E+00	5.87235888E-03
1.95000000E+03	1.68049289E+06	-1.11333041E+04	5.65801984E-03	3.10317026E+00	5.83404046E-03
2.00000000E+03	1.15560543E+06	-9.84287109E+03	5.68627329E-03	3.39507846E+00	5.84030883E-03
2.05000000E+03	6.98138587E+05	-8.43647783E+03	5.70469353E-03	3.68701462E+00	5.83539032E-03
2.08000000E+03	4.58432009E+05	-7.53701222E+03	5.71160597E-03	3.86196884E+00	5.82766714E-03
2.10000000E+03	3.56353902E+05	-4.79047051E+03	5.71485677E-03	3.97780364E+00	5.78833024E-03
2.12000000E+03	2.66925179E+05	-4.14933854E+03	5.71734133E-03	4.09349576E+00	5.78072872E-03
2.20000000E+03	6.29479020E+04	-1.15139081E+03	5.72203307E-03	4.55421027E+00	5.73934722E-03
2.25000000E+03	1.78092269E+04	-6.49025597E+02	5.72376189E-03	4.84200071E+00	5.75621317E-03
2.30000000E+03	6.83702362E-26	-5.06659803E-08	5.72424826E-03	5.12950331E+00	5.72424826E-03

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Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
2.98743578E+01	8.92477257E+02	2.01029145E+03	2.01029145E+03	2.01029145E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-9.75186387E-03	2.88351957E+00	-9.75186387E-03
5.00000000E+01	7.47837740E+05	4.34811741E+04	-9.74805817E-03	2.39381239E+00	-9.87340695E-03
1.00000000E+02	5.40106199E+06	1.46968220E+05	-9.69542376E-03	1.89385255E+00	-1.01229515E-02
1.50000000E+02	1.47803956E+07	2.19744105E+05	-9.49964780E-03	1.38577469E+00	-1.01447312E-02
2.00000000E+02	2.66833792E+07	2.51856377E+05	-9.08761156E-03	8.84992679E-01	-9.83379522E-03
2.50000000E+02	3.98236799E+07	2.72437205E+05	-8.42427189E-03	4.06985550E-01	-9.23895822E-03
3.00000000E+02	5.40600450E+07	2.90733296E+05	-7.48698850E-03	-3.47581334E-02	-8.36457065E-03
3.50000000E+02	6.79021826E+07	2.52358306E+05	-6.26415635E-03	-4.21669481E-01	-7.03314175E-03
4.00000000E+02	7.83365641E+07	1.56549579E+05	-4.79376931E-03	-7.30925671E-01	-5.27538330E-03
4.50000000E+02	8.27672609E+07	1.47195456E+04	-3.17089357E-03	-9.44092125E-01	-3.21661589E-03
5.00000000E+02	7.93598922E+07	-1.53995416E+05	-1.53554344E-03	-1.05081286E+00	-1.05251902E-03
5.50000000E+02	6.79187950E+07	-2.61854817E+05	-5.30581370E-05	-1.05347547E+00	7.76393076E-04
6.00000000E+02	5.47512708E+07	-2.64811853E+05	1.17388912E-03	-9.82440186E-01	2.02107570E-03
6.50000000E+02	4.14424467E+07	-2.67480025E+05	2.13604879E-03	-8.55790860E-01	3.00039472E-03
7.00000000E+02	2.80104636E+07	-2.69717852E+05	2.83076448E-03	-6.86876022E-01	3.71121434E-03
7.50000000E+02	1.44795684E+07	-2.71422647E+05	3.25580693E-03	-4.89198140E-01	4.15093406E-03
8.00000000E+02	8.78164692E+05	-2.72530890E+05	3.40947663E-03	-2.76333965E-01	4.31759827E-03
8.50000000E+02	-1.27631535E+07	-2.73018511E+05	3.29066736E-03	-6.20003536E-02	4.20996665E-03
9.00000000E+02	-2.64135787E+07	-2.72901072E+05	2.89889019E-03	1.40082435E-01	3.82754541E-03
9.48000000E+02	-3.94995699E+07	-2.72270015E+05	2.26607542E-03	3.09805250E-01	3.20211914E-03
9.62000000E+02	-4.33095120E+07	-2.72001593E+05	2.03420823E-03	3.53050116E-01	2.97214476E-03
1.00000000E+03	-5.35847514E+07	-2.69267437E+05	1.88170084E-03	4.65638119E-01	2.95256269E-03
1.05000000E+03	-6.69748939E+07	-2.65426938E+05	1.58067052E-03	6.12221381E-01	2.90301411E-03
1.10000000E+03	-8.00483579E+07	-2.58286711E+05	1.10370302E-03	7.55294365E-01	2.82561443E-03
1.15000000E+03	-9.29049093E+07	-2.55915084E+05	4.53428431E-04	8.80335775E-01	2.15952899E-03
1.15500000E+03	-9.41768210E+07	-2.52843462E+05	3.83095991E-04	8.90906895E-01	2.06871907E-03
1.18600000E+03	-1.01541898E+08	-2.07678840E+05	-5.59421005E-05	9.43308449E-01	1.06664622E-03
1.20000000E+03	-1.04159409E+08	-1.66171415E+05	-2.30558731E-04	9.55457154E-01	6.67665133E-04
1.25000000E+03	-1.07462953E+08	3.43696246E+04	-9.18689166E-04	9.45691961E-01	-1.11508702E-03
1.28000000E+03	-1.05122422E+08	1.20929965E+05	-1.33098215E-03	8.98549781E-01	-2.02201053E-03
1.30000000E+03	-1.02408989E+08	1.50187720E+05	-1.53062530E-03	8.57865310E-01	-2.19812628E-03

1.35000000E+03	-9.44735968E+07	1.66798490E+05	-2.00423364E-03	7.34066433E-01	-2.74556026E-03
1.40000000E+03	-8.57767062E+07	1.80557209E+05	-2.43780338E-03	5.84188404E-01	-3.24027986E-03
1.45000000E+03	-7.64740166E+07	1.90949630E+05	-2.82803745E-03	4.11010698E-01	-3.67670247E-03
1.50000000E+03	-6.67454481E+07	1.97522067E+05	-3.17244676E-03	2.17565576E-01	-4.05032262E-03
1.55000000E+03	-5.67920687E+07	1.99862511E+05	-3.53555658E-03	-4.35301114E-03	-5.53418168E-03
1.60000000E+03	-4.68351388E+07	1.98432203E+05	-4.08088857E-03	-2.94770082E-01	-6.06521060E-03
1.65000000E+03	-3.69747956E+07	1.95254658E+05	-4.52185661E-03	-6.08874739E-01	-6.47440319E-03
1.68000000E+03	-3.12107219E+07	1.87412323E+05	-4.73705699E-03	-8.05490162E-01	-6.61118021E-03
1.70000000E+03	-2.75676399E+07	1.75922084E+05	-4.86072062E-03	-9.37924260E-01	-6.61994147E-03
1.74400000E+03	-2.07957250E+07	1.26371435E+05	-5.28307866E-03	-1.27388580E+00	-7.36937984E-03
1.75000000E+03	-2.00608287E+07	1.18677713E+05	-5.33209729E-03	-1.31785709E+00	-7.28886090E-03
1.80000000E+03	-1.53067339E+07	8.01170792E+04	-5.68251656E-03	-1.67161298E+00	-6.98948360E-03
1.85000000E+03	-1.15748443E+07	6.87992882E+04	-5.95038921E-03	-2.02331341E+00	-7.06095077E-03
1.90000000E+03	-8.46283358E+06	5.53208686E+04	-6.14964278E-03	-2.37605559E+00	-7.03336272E-03
1.95000000E+03	-6.07864865E+06	3.96899008E+04	-6.29375498E-03	-2.72523967E+00	-6.92126329E-03
2.00000000E+03	-4.20088665E+06	3.53336699E+04	-6.39618731E-03	-3.07218408E+00	-6.94913989E-03
2.05000000E+03	-2.55398224E+06	3.04555165E+04	-6.46332949E-03	-3.41945542E+00	-6.93514229E-03
2.08000000E+03	-1.68750521E+06	2.72784064E+04	-6.48868310E-03	-3.62714530E+00	-6.90873864E-03
2.10000000E+03	-1.31493231E+06	1.75093393E+04	-6.50066308E-03	-3.76276969E+00	-6.76921123E-03
2.12000000E+03	-9.87636472E+05	1.52067078E+04	-6.50984266E-03	-3.89788923E+00	-6.74214800E-03
2.20000000E+03	-2.35287711E+05	4.28948975E+03	-6.52727254E-03	-4.43095356E+00	-6.59177615E-03
2.25000000E+03	-6.67560563E+04	2.42934175E+03	-6.53374284E-03	-4.76362417E+00	-6.65520993E-03
2.30000000E+03	1.49074468E-25	-3.71375136E-07	-6.53556740E-03	-5.09524002E+00	-6.53556740E-03

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Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.92943083E+01	4.80170116E+03	2.01029145E+03	2.01029145E+03	2.01029145E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-5.04735389E-03	1.12005227E+00	-5.04735389E-03
5.00000000E+01	1.51377852E+06	8.68976880E+04	-5.03959746E-03	8.63406415E-01	-5.29010862E-03
1.00000000E+02	1.04655742E+07	2.74605388E+05	-4.93590429E-03	5.87329896E-01	-5.73472613E-03
1.50000000E+02	2.73260614E+07	3.81552707E+05	-4.56681921E-03	2.99068757E-01	-5.68690986E-03
2.00000000E+02	4.72596428E+07	4.07105688E+05	-3.82300114E-03	2.88696910E-02	-5.02914735E-03
2.50000000E+02	6.73847393E+07	3.90388450E+05	-2.67519538E-03	-1.95165283E-01	-3.84259883E-03
3.00000000E+02	8.32964421E+07	2.04159153E+05	-1.15337052E-03	-3.40008078E-01	-1.76962752E-03
3.50000000E+02	8.55881836E+07	-1.15714532E+05	5.62257406E-04	-3.61889117E-01	9.14862347E-04
4.00000000E+02	7.23902601E+07	-3.95990601E+05	2.16550974E-03	-2.52146008E-01	3.38374754E-03
4.50000000E+02	4.83633264E+07	-5.32655279E+05	3.38450641E-03	-3.70915142E-02	5.03905719E-03
5.00000000E+02	2.28672815E+07	-4.46697149E+05	4.08966294E-03	2.31472105E-01	5.49078018E-03
5.50000000E+02	6.26450887E+06	-2.74704720E+05	4.36468215E-03	4.96489504E-01	5.23483671E-03
6.00000000E+02	-7.24371785E+06	-2.64944646E+05	4.35407666E-03	7.58584480E-01	5.20168807E-03
6.50000000E+02	-2.01627254E+07	-2.51158411E+05	4.07886309E-03	1.01202098E+00	4.89046669E-03
7.00000000E+02	-3.22963525E+07	-2.33587065E+05	3.55280754E-03	1.24322965E+00	4.31531435E-03
7.50000000E+02	-4.34656666E+07	-2.12676569E+05	2.79344412E-03	1.43946120E+00	3.49483205E-03
8.00000000E+02	-5.35188618E+07	-1.89063363E+05	1.82163020E-03	1.58899876E+00	2.45162311E-03
8.50000000E+02	-6.23403570E+07	-1.63556834E+05	6.60911439E-04	1.68134236E+00	1.21163483E-03
9.00000000E+02	-6.98589493E+07	-1.37119198E+05	-6.63285921E-04	1.70735585E+00	-1.96682921E-04
9.48000000E+02	-7.58321914E+07	-1.11876613E+05	-2.06386046E-03	1.66279010E+00	-1.67923713E-03
9.62000000E+02	-7.73480417E+07	-1.04692790E+05	-2.49281203E-03	1.63612242E+00	-2.13180241E-03
1.00000000E+03	-7.99653540E+07	-4.54788260E+04	-2.74047575E-03	1.54640559E+00	-2.55960895E-03
1.05000000E+03	-8.11247496E+07	9.16011982E+03	-3.14215628E-03	1.40466581E+00	-3.18779153E-03
1.10000000E+03	-7.84858068E+07	8.48837753E+04	-3.65925565E-03	1.21946926E+00	-4.22514749E-03
1.15000000E+03	-7.37960811E+07	1.02112456E+05	-4.23228390E-03	9.90768937E-01	-4.91303361E-03
1.15500000E+03	-7.32396863E+07	1.20367718E+05	-4.28756623E-03	9.65759838E-01	-5.09001768E-03
1.18600000E+03	-6.70427521E+07	3.43610033E+05	-4.60518503E-03	7.88683532E-01	-6.46253656E-03
1.20000000E+03	-6.09860011E+07	5.17805599E+05	-4.71415972E-03	6.90696978E-01	-7.51310890E-03
1.25000000E+03	-1.98719123E+07	1.04088332E+06	-4.98932495E-03	2.12056625E-01	-1.09372296E-02
1.28000000E+03	1.21205681E+07	1.06401011E+06	-5.00454847E-03	-1.20974801E-01	-1.10846062E-02
1.30000000E+03	3.30681864E+07	1.02500479E+06	-4.96097275E-03	-3.13797492E-01	-9.51654961E-03

1.35000000E+03	8.30009474E+07	9.63642795E+05	-4.68073033E-03	-7.77764355E-01	-8.96358720E-03
1.40000000E+03	1.28598218E+08	8.52315902E+05	-4.16984690E-03	-1.20259732E+00	-7.95791757E-03
1.45000000E+03	1.67491883E+08	6.96629571E+05	-3.45497108E-03	-1.56685812E+00	-6.55110251E-03
1.50000000E+03	1.97651447E+08	5.04425182E+05	-2.57336995E-03	-1.85221370E+00	-4.81525964E-03
1.55000000E+03	2.17485589E+08	2.85190831E+05	-1.32402664E-03	-2.06025766E+00	-4.17593495E-03
1.60000000E+03	2.26663115E+08	1.28209461E+05	1.02087932E-03	-2.16000143E+00	-2.61215297E-04
1.65000000E+03	2.31354528E+08	5.03476010E+04	3.43491942E-03	-2.09572784E+00	2.93144341E-03
1.68000000E+03	2.31359858E+08	-6.81272807E+04	4.89799838E-03	-1.97078687E+00	5.57927119E-03
1.70000000E+03	2.28717971E+08	-2.02516138E+05	5.86752679E-03	-1.83669369E+00	7.89268816E-03
1.74400000E+03	2.11716768E+08	-5.69868224E+05	9.76758350E-03	-1.20972826E+00	1.91756966E-02
1.75000000E+03	2.08177358E+08	-6.06676981E+05	1.02714933E-02	-1.09131167E+00	2.02744114E-02
1.80000000E+03	1.74242166E+08	-7.03747282E+05	1.41030507E-02	7.73772521E-02	2.55834305E-02
1.85000000E+03	1.39480456E+08	-6.79296138E+05	1.72382436E-02	1.42791593E+00	2.82034758E-02
1.90000000E+03	1.07085469E+08	-6.08552104E+05	1.96980093E-02	2.87427094E+00	2.94192889E-02
1.95000000E+03	7.94316463E+07	-4.89502747E+05	2.15532591E-02	4.34741775E+00	2.92924330E-02
2.00000000E+03	5.59346990E+07	-4.48376073E+05	2.29034956E-02	5.83042024E+00	2.99203355E-02
2.05000000E+03	3.47954462E+07	-3.95173873E+05	2.38063635E-02	7.32911037E+00	2.99283445E-02
2.08000000E+03	2.34953264E+07	-3.57444393E+05	2.41549762E-02	8.22341144E+00	2.96592016E-02
2.10000000E+03	1.84593911E+07	-2.37868382E+05	2.43224265E-02	8.78564808E+00	2.79707146E-02
2.12000000E+03	1.39921930E+07	-2.08551676E+05	2.44518420E-02	9.34183232E+00	2.76377826E-02
2.20000000E+03	3.44537535E+06	-6.21470511E+04	2.47020818E-02	1.14703135E+01	2.56366239E-02
2.25000000E+03	9.86328040E+05	-3.57332663E+04	2.47972164E-02	1.27975212E+01	2.65838797E-02
2.30000000E+03	2.96475367E-23	-6.66828147E-05	2.48242421E-02	1.41102705E+01	2.48242421E-02

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Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI	SQ DM	ACCELERATION
8.56019344E+01	7.32769117E+03	2.01029145E+03	2.01029145E+03	2.01029145E+03	0.	
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN	
0.	0.	0.	-1.62420261E-02	3.21933643E+00	-1.62420261E-02	
5.00000000E+01	6.53603114E+06	3.72730103E+05	-1.62084197E-02	2.38876548E+00	-1.72829368E-02	
1.00000000E+02	4.41438465E+07	1.13440111E+06	-1.57670522E-02	1.47725262E+00	-1.90670034E-02	
1.50000000E+02	1.12178455E+08	1.50578799E+06	-1.42343623E-02	5.22667750E-01	-1.86547713E-02	
2.00000000E+02	1.88968149E+08	1.52979781E+06	-1.12246374E-02	-3.46683235E-01	-1.57570226E-02	
2.50000000E+02	2.61634904E+08	1.33538226E+06	-6.70252563E-03	-1.01720169E+00	-1.06958043E-02	
3.00000000E+02	3.03326440E+08	1.06147127E+05	-9.53335618E-04	-1.33729549E+00	-1.27374207E-03	
3.50000000E+02	2.64468442E+08	-1.61093690E+06	4.86847573E-03	-1.11810299E+00	9.77731733E-03	
4.00000000E+02	1.53022253E+08	-2.68872916E+06	9.13369567E-03	-4.17353892E-01	1.74053856E-02	
4.50000000E+02	1.47303422E+07	-2.62689048E+06	1.08061189E-02	5.20226549E-01	1.89658497E-02	
5.00000000E+02	-8.82830065E+07	-1.29805513E+06	9.95944283E-03	1.36938378E+00	1.40309428E-02	
5.50000000E+02	-1.08782914E+08	3.18914474E+03	7.86914936E-03	1.88098735E+00	7.85904743E-03	
6.00000000E+02	-1.07435614E+08	5.20273227E+04	5.70289136E-03	2.21588113E+00	5.53644545E-03	
6.50000000E+02	-1.03470673E+08	1.07437121E+05	3.58920816E-03	2.43509767E+00	3.24203144E-03	
7.00000000E+02	-9.66277043E+07	1.66702544E+05	1.58328289E-03	2.54160686E+00	1.03910967E-03	
7.50000000E+02	-8.67797196E+07	2.27216527E+05	-2.55836692E-04	2.54165198E+00	-1.00517608E-03	
8.00000000E+02	-7.39257127E+07	2.86560319E+05	-1.86783855E-03	2.44486949E+00	-2.82270875E-03	
8.50000000E+02	-5.81792268E+07	3.42584036E+05	-3.19355843E-03	2.26426932E+00	-4.34709655E-03	
9.00000000E+02	-3.97529333E+07	3.93485189E+05	-4.17712318E-03	2.01608638E+00	-5.51611417E-03	
9.48000000E+02	-1.98135244E+07	4.36244221E+05	-4.75224572E-03	1.73204409E+00	-6.25202036E-03	
9.62000000E+02	-1.36269134E+07	4.47459361E+05	-4.84595221E-03	1.64351506E+00	-6.38891552E-03	
1.00000000E+03	5.39923601E+06	5.34558940E+05	-4.85908346E-03	1.38838079E+00	-6.98499509E-03	
1.05000000E+03	3.35417971E+07	6.01307833E+05	-4.76102198E-03	1.02191544E+00	-7.75670721E-03	
1.10000000E+03	6.58082329E+07	6.74934934E+05	-4.43723823E-03	6.04842875E-01	-8.93680445E-03	
1.15000000E+03	9.98265755E+07	6.84080906E+05	-3.81483722E-03	1.70686099E-01	-8.37537660E-03	
1.15500000E+03	1.03258138E+08	6.88346118E+05	-3.73849092E-03	1.28924617E-01	-8.32746504E-03	
1.18600000E+03	1.24652670E+08	6.73752572E+05	-3.22861237E-03	-1.16526942E-01	-6.87051817E-03	
1.20000000E+03	1.33713300E+08	6.15096859E+05	-3.00927691E-03	-2.09186402E-01	-6.33412480E-03	
1.25000000E+03	1.51411153E+08	2.67501176E+04	-2.07330986E-03	-4.37865678E-01	-2.22616767E-03	
1.28000000E+03	1.46980671E+08	-3.25690741E+05	-1.49237158E-03	-4.65990628E-01	3.68718369E-04	
1.30000000E+03	1.39196052E+08	-4.52427882E+05	-1.21679669E-03	-4.58459042E-01	7.93993892E-04	

1.35000000E+03	1.14690558E+08	-5.25970361E+05	-6.05017161E-04	-3.94600036E-01	1.73262889E-03
1.40000000E+03	8.68443860E+07	-5.84848242E+05	-1.19377167E-04	-2.88391074E-01	2.47994835E-03
1.45000000E+03	5.65572166E+07	-6.22707658E+05	2.26097663E-04	-1.50506402E-01	2.99368726E-03
1.50000000E+03	2.49980538E+07	-6.35180251E+05	4.22394305E-04	6.60137902E-03	3.24541764E-03
1.55000000E+03	-6.49865856E+06	-6.19532768E+05	4.62680438E-04	2.04019494E-01	6.65800811E-03
1.60000000E+03	-3.63972934E+07	-5.83488801E+05	2.35167698E-04	5.21760908E-01	6.07005571E-03
1.65000000E+03	-6.47987262E+07	-5.45422083E+05	-2.99096136E-04	8.05423906E-01	5.15512470E-03
1.68000000E+03	-8.01949425E+07	-4.66235804E+05	-7.58212387E-04	9.43769198E-01	3.90414565E-03
1.70000000E+03	-8.85377696E+07	-3.60608588E+05	-1.11417778E-03	1.00853157E+00	2.49190811E-03
1.74400000E+03	-9.64833867E+07	2.66292418E+04	-2.76785528E-03	1.05567319E+00	-3.20748485E-03
1.75000000E+03	-9.61676588E+07	7.75889584E+04	-2.99909764E-03	1.03316341E+00	-4.27838797E-03
1.80000000E+03	-8.57363573E+07	2.77919598E+05	-4.83451391E-03	6.65501086E-01	-9.36827571E-03
1.85000000E+03	-7.12106716E+07	2.98761516E+05	-6.40572568E-03	1.47585029E-01	-1.12283490E-02
1.90000000E+03	-5.63294013E+07	2.91518544E+05	-7.68052549E-03	-4.44780716E-01	-1.23373712E-02
1.95000000E+03	-4.25744630E+07	2.53405872E+05	-8.66638870E-03	-1.07322206E+00	-1.26728056E-02
2.00000000E+03	-3.03010791E+07	2.36201320E+05	-9.39371065E-03	-1.71881457E+00	-1.30901319E-02
2.05000000E+03	-1.90887597E+07	2.10938807E+05	-9.88550384E-03	-2.37632653E+00	-1.31533397E-02
2.08000000E+03	-1.30390821E+07	1.91888058E+05	-1.00776994E-02	-2.76939929E+00	-1.30325509E-02
2.10000000E+03	-1.02881560E+07	1.30296659E+05	-1.01708171E-02	-3.01419904E+00	-1.21692321E-02
2.12000000E+03	-7.83498785E+06	1.14821367E+05	-1.02431033E-02	-3.25592295E+00	-1.19971725E-02
2.20000000E+03	-1.96114962E+06	3.51906419E+04	-1.03841663E-02	-4.17141515E+00	-1.09133489E-02
2.25000000E+03	-5.63866794E+05	2.03841728E+04	-1.04384257E-02	-4.74298048E+00	-1.14576343E-02
2.30000000E+03	3.32871585E-25	1.75007690E-08	-1.04538943E-02	-5.30658891E+00	-1.04538943E-02

Saturn 1B/Centaur

t = 80

Mode 5

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.12847066E+02	1.27344604E+04	2.01029145E+03	2.01029145E+03	2.01029145E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-6.47852661E-03	1.09141558E+00	-6.47852661E-03
5.00000000E+01	3.74883739E+06	2.11296733E+05	-6.45913401E-03	7.56897857E-01	-7.06826634E-03
1.00000000E+02	2.42567477E+07	5.98320987E+05	-6.21243379E-03	3.78963377E-01	-7.95293814E-03
1.50000000E+02	5.84219226E+07	7.19656127E+05	-5.39544990E-03	-1.39479435E-02	-7.50808095E-03
2.00000000E+02	9.30934844E+07	6.48661440E+05	-3.87435825E-03	-3.50830862E-01	-5.79617010E-03
2.50000000E+02	1.20678165E+08	4.23816467E+05	-1.71794586E-03	-5.75026860E-01	-2.98531124E-03
3.00000000E+02	1.19433792E+08	-6.27369020E+05	7.68786924E-04	-5.94868454E-01	2.66250828E-03
3.50000000E+02	5.73478667E+07	-1.74642099E+06	2.63046582E-03	-3.16245031E-01	7.95215411E-03
4.00000000E+02	-4.01125733E+07	-1.97779413E+06	2.82213766E-03	1.26677082E-01	8.90668498E-03
4.50000000E+02	-1.23212511E+08	-1.20069112E+06	1.12354232E-03	4.89074984E-01	4.85316731E-03
5.00000000E+02	-1.50798049E+08	1.26599395E+05	-1.72807626E-03	5.62199498E-01	-2.12516990E-03
5.50000000E+02	-1.18375693E+08	8.63392106E+05	-4.48416572E-03	3.01747104E-01	-7.21904621E-03
6.00000000E+02	-7.50287431E+07	8.67635261E+05	-6.41856768E-03	-1.12423408E-01	-9.19430802E-03
6.50000000E+02	-3.19266040E+07	8.53079779E+05	-7.48691020E-03	-6.02236230E-01	-1.02435872E-02
7.00000000E+02	9.92872843E+06	8.17561143E+05	-7.70392910E-03	-1.12143055E+00	-1.03727239E-02
7.50000000E+02	4.94745120E+07	7.60807500E+05	-7.10516535E-03	-1.62469884E+00	-9.61423911E-03
8.00000000E+02	8.56804469E+07	6.84372539E+05	-5.74724254E-03	-2.06903833E+00	-8.02769417E-03
8.50000000E+02	1.17637116E+08	5.91512968E+05	-3.70632340E-03	-2.41507017E+00	-5.69804715E-03
9.00000000E+02	1.44636976E+08	4.87013940E+05	-1.07486768E-03	-2.62822854E+00	-2.73212771E-03
9.48000000E+02	1.65487102E+08	3.81391157E+05	1.91044107E-03	-2.68107609E+00	5.99247113E-04
9.62000000E+02	1.70610196E+08	3.50509702E+05	2.85171518E-03	-2.66541340E+00	1.64306103E-03
1.00000000E+03	1.78006722E+08	9.22842719E+04	3.40198877E-03	-2.57381495E+00	3.03497928E-03
1.05000000E+03	1.77658126E+08	-1.51780155E+05	4.29113764E-03	-2.37974951E+00	5.04729870E-03
1.10000000E+03	1.60274852E+08	-4.91441940E+05	5.38931709E-03	-2.03622257E+00	8.66559669E-03
1.15000000E+03	1.33759707E+08	-5.65899358E+05	6.49704406E-03	-1.56146484E+00	1.02697064E-02
1.15500000E+03	1.30739182E+08	-6.41874672E+05	6.59650353E-03	-1.50859319E+00	1.08756680E-02
1.18600000E+03	1.00997923E+08	-1.51355207E+06	7.12821957E-03	-1.10731143E+00	1.53095821E-02
1.20000000E+03	7.53068372E+07	-2.13176543E+06	7.27902925E-03	-8.67539365E-01	1.88020857E-02
1.25000000E+03	-6.76974348E+07	-3.01062788E+06	7.32777333E-03	3.18713524E-01	2.45313612E-02
1.28000000E+03	-1.46890520E+08	-2.12090734E+06	6.90381519E-03	9.85482240E-01	1.90232857E-02
1.30000000E+03	-1.84128475E+08	-1.57920501E+06	6.58379649E-03	1.28597884E+00	1.36024854E-02

1.35000000E+03	-2.51947345E+08	-1.10355098E+06	5.52599658E-03	1.89150161E+00	1.04306676E-02
1.40000000E+03	-2.91913940E+08	-4.74221235E+05	4.20601520E-03	2.31323331E+00	6.31366513E-03
1.45000000E+03	-2.97813479E+08	2.48185589E+05	2.77391240E-03	2.51407050E+00	1.67086534E-03
1.50000000E+03	-2.66682465E+08	9.95335386E+05	1.40196658E-03	2.47948355E+00	-3.02174624E-03
1.55000000E+03	-1.99031103E+08	1.69548962E+06	3.12980842E-05	2.12741831E+00	-1.69235981E-02
1.60000000E+03	-1.02228999E+08	2.04981026E+06	-1.57026798E-03	1.11664583E+00	-2.20683706E-02
1.65000000E+03	1.72509981E+06	2.09653822E+06	-2.10141219E-03	-1.92487319E-02	-2.30667943E-02
1.68000000E+03	6.40499099E+07	2.03166861E+06	-1.89275251E-03	-7.03393404E-01	-2.22094386E-02
1.70000000E+03	1.03172099E+08	1.85708863E+06	-1.53949903E-03	-1.12921080E+00	-2.01103854E-02
1.74400000E+03	1.64266851E+08	7.45324855E+05	8.86911220E-04	-2.16162583E+00	-1.14178642E-02
1.75000000E+03	1.68174866E+08	5.59595609E+05	1.28606402E-03	-2.21959057E+00	-7.94057422E-03
1.80000000E+03	1.69293221E+08	-2.91970800E+05	4.73176531E-03	-2.08812745E+00	9.49474737E-03
1.85000000E+03	1.50532186E+08	-4.49383360E+05	7.94316249E-03	-1.46535880E+00	1.51971312E-02
1.90000000E+03	1.25456574E+08	-5.40932624E+05	1.07106972E-02	-5.94319645E-01	1.93517935E-02
1.95000000E+03	9.78421144E+07	-5.48582445E+05	1.29443308E-02	4.38207829E-01	2.16175711E-02
2.00000000E+03	7.08445194E+07	-5.27329768E+05	1.46294274E-02	1.55447818E+00	2.28818494E-02
2.05000000E+03	4.55172678E+07	-4.81623359E+05	1.57892367E-02	2.71144197E+00	2.32504816E-02
2.08000000E+03	3.16366977E+07	-4.42256942E+05	1.62509795E-02	3.40685965E+00	2.30612188E-02
2.10000000E+03	2.51187259E+07	-3.10037694E+05	1.64775850E-02	3.83440406E+00	2.12327644E-02
2.12000000E+03	1.92589682E+07	-2.75336327E+05	1.66546332E-02	4.25550267E+00	2.08608099E-02
2.20000000E+03	4.93324669E+06	-8.78759795E+04	1.70046890E-02	5.82234946E+00	1.83261323E-02
2.25000000E+03	1.42692223E+06	-5.14322606E+04	1.71415543E-02	6.80404446E+00	1.97131673E-02
2.30000000E+03	3.61119122E-24	1.49907255E-07	1.71807626E-02	7.76667776E+00	1.71807626E-02

\$ASOC1

CASE V 100 SECOND BURN

N=+5, WDSQ=0., DWOS=10., H=0.,

CODEI=1, CODEII=1, P=0.,

ACC=0.,

OUTST=0., 50., 100., 150., 200., 250., 300.,

350., 400., 450., 500., 550., 600., 650., 700.,

750., 800., 850., 900., 948., 962., 1000.,

1050., 1100., 1150., 1155., 1186., 1200., 1250.,

1280., 1300., 1350., 1400., 1450., 1500., 1550.,

1600., 1650., 1680., 1700., 1744., 1750., 1800.,

1850., 1900., 1950., 2000., 2050., 2080., 2100.,

2120., 2200., 2250., 2300.,

RHOAC=2080., 900., 2120., 100.,

\$END

Saturn 1B/Centaur

t = 100

Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.62840595E+01	2.65170594E+02	1.67761658E+03	1.67761658E+03	1.67761658E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-6.52639738E-03	2.15048236E+00	-6.52639738E-03
5.00000000E+01	1.67299753E+05	9.76276554E+03	-6.52554769E-03	1.82368954E+00	-6.55369208E-03
1.00000000E+02	1.22279159E+06	3.35828075E+04	-6.51368374E-03	1.49456200E+00	-6.61137549E-03
1.50000000E+02	3.38571209E+06	5.10724236E+04	-6.46905114E-03	1.16349027E+00	-6.61897995E-03
2.00000000E+02	6.17405786E+06	5.94366461E+04	-6.37413213E-03	8.33953835E-01	-6.55022716E-03
2.50000000E+02	9.30833975E+06	6.57988759E+04	-6.21984156E-03	5.09513307E-01	-6.41660413E-03
3.00000000E+02	1.28985497E+07	7.75868240E+04	-5.99874319E-03	1.92961867E-01	-6.23294000E-03
3.50000000E+02	1.68877880E+07	7.95032735E+04	-5.70103874E-03	-1.11964718E-01	-5.9433085E-03
4.00000000E+02	2.06075484E+07	6.69506373E+04	-5.32503823E-03	-3.99314859E-01	-5.53100725E-03
4.50000000E+02	2.33764664E+07	4.66277778E+04	-4.88324983E-03	-6.63308533E-01	-5.02808652E-03
5.00000000E+02	2.56918591E+07	4.59536766E+04	-4.39251038E-03	-9.02622620E-01	-4.53664940E-03
5.50000000E+02	2.79685892E+07	4.50849581E+04	-3.85583348E-03	-1.11619722E+00	-3.99864458E-03
6.00000000E+02	3.01974951E+07	4.40447186E+04	-3.27408592E-03	-1.30172621E+00	-3.41499387E-03
6.50000000E+02	3.23706189E+07	4.28580134E+04	-2.64830586E-03	-1.45695412E+00	-2.78679901E-03
7.00000000E+02	3.44813037E+07	4.15518102E+04	-1.97967776E-03	-1.57968458E+00	-2.11531685E-03
7.50000000E+02	3.65242876E+07	4.01549344E+04	-1.26950541E-03	-1.66778738E+00	-1.40193272E-03
8.00000000E+02	3.84957953E+07	3.86980103E+04	-5.19183133E-04	-1.71920419E+00	-6.48131819E-04
8.50000000E+02	4.03936262E+07	3.72133972E+04	2.69834836E-04	-1.73195284E+00	1.44531062E-04
9.00000000E+02	4.22172397E+07	3.57351231E+04	1.09606672E-03	-1.70412992E+00	9.74463650E-04
9.48000000E+02	4.38991832E+07	3.43550011E+04	1.92289040E-03	-1.63755677E+00	1.80478051E-03
9.62000000E+02	4.43774118E+07	3.39644440E+04	2.17006742E-03	-1.61055577E+00	2.05294865E-03
1.00000000E+03	4.55940114E+07	3.07413885E+04	2.31137101E-03	-1.52998077E+00	2.18911419E-03
1.05000000E+03	4.70698191E+07	2.77278325E+04	2.54191424E-03	-1.41544130E+00	2.40377558E-03
1.10000000E+03	4.83334369E+07	2.34445766E+04	2.85025334E-03	-1.28827636E+00	2.69395617E-03
1.15000000E+03	4.94790064E+07	2.23988178E+04	3.21800206E-03	-1.14424299E+00	3.06867661E-03
1.15500000E+03	4.95880660E+07	2.12276701E+04	3.25524569E-03	-1.12878697E+00	3.11372789E-03
1.18600000E+03	5.00801352E+07	5.85658402E+03	3.47896992E-03	-1.02751762E+00	3.44731270E-03
1.20000000E+03	5.00702190E+07	-7.16639123E+03	3.56397175E-03	-9.78163404E-01	3.60270900E-03
1.25000000E+03	4.82956417E+07	-6.20230407E+04	3.88277776E-03	-7.81806332E-01	4.23719513E-03
1.28000000E+03	4.61266795E+07	-8.19640413E+04	4.06572359E-03	-6.50163761E-01	4.53408954E-03
1.30000000E+03	4.44260229E+07	-8.79536622E+04	4.15281268E-03	-5.60414479E-01	4.54371785E-03

1.35000000E+03	3.99535668E+07	-9.07047983E+04	4.35570336E-03	-3.27734384E-01	4.75883580E-03
1.40000000E+03	3.53800549E+07	-9.19855335E+04	4.53681947E-03	-8.50029583E-02	4.94564406E-03
1.45000000E+03	3.07804876E+07	-9.17381331E+04	4.69585429E-03	1.66348565E-01	5.10357933E-03
1.50000000E+03	2.62325295E+07	-8.99137774E+04	4.83286828E-03	4.24870902E-01	5.23248507E-03
1.55000000E+03	2.18160720E+07	-8.64695682E+04	4.97374845E-03	6.94072426E-01	5.83844413E-03
1.60000000E+03	1.75957435E+07	-8.32003653E+04	5.18102539E-03	9.90329909E-01	6.01302904E-03
1.65000000E+03	1.34845369E+07	-8.08655699E+04	5.34450411E-03	1.29476059E+00	6.15315981E-03
1.68000000E+03	1.11139622E+07	-7.63449822E+04	5.42211263E-03	1.48000300E+00	6.18556245E-03
1.70000000E+03	9.64291911E+06	-7.03193458E+04	5.46576914E-03	1.60360254E+00	6.16896260E-03
1.74400000E+03	7.01230122E+06	-4.71809497E+04	5.61082023E-03	1.89110727E+00	6.38974365E-03
1.75000000E+03	6.73945888E+06	-4.38109784E+04	5.62731830E-03	1.92932358E+00	6.34967573E-03
1.80000000E+03	5.04824272E+06	-2.76522223E+04	5.74383752E-03	2.24149056E+00	6.19493413E-03
1.85000000E+03	3.77234926E+06	-2.32893912E+04	5.83167987E-03	2.55169230E+00	6.20761838E-03
1.90000000E+03	2.72871870E+06	-1.83017536E+04	5.89627991E-03	2.86174031E+00	6.18959865E-03
1.95000000E+03	1.94556204E+06	-1.28709104E+04	5.94256514E-03	3.17022647E+00	6.14605779E-03
2.00000000E+03	1.33855066E+06	-1.13866560E+04	5.97528258E-03	3.47777229E+00	6.15347751E-03
2.05000000E+03	8.09185972E+05	-9.76504006E+03	5.99662481E-03	3.78535758E+00	6.14790351E-03
2.08000000E+03	5.31694273E+05	-8.72617639E+03	6.00463893E-03	3.96967103E+00	6.13901183E-03
2.10000000E+03	4.13408644E+05	-5.55189011E+03	6.00840969E-03	4.09162099E+00	6.09356138E-03
2.12000000E+03	3.09751515E+05	-4.81019743E+03	6.01129244E-03	4.21340614E+00	6.08477545E-03
2.20000000E+03	7.31270195E+04	-1.33710459E+03	6.01673929E-03	4.69816943E+00	6.03684613E-03
2.25000000E+03	2.06954508E+04	-7.54091051E+02	6.01874795E-03	5.00096809E+00	6.05645250E-03
2.30000000E+03	-6.78572583E-30	-1.05438254E-09	6.01931319E-03	5.30343307E+00	6.01931319E-03

Saturn 1B/Centaur

t = 100
Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
3.42069883E+01	1.17011805E+03	1.67761658E+03	1.67761658E+03	1.67761658E+03	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q	EQ. PHI	PHI PR. 1/IN
0.	0.	0.		-1.23480553E-02	3.31847410E+00	-1.23480553E-02	
5.00000000E+01	1.11787432E+06	6.47641314E+04		-1.23423554E-02	2.69791155E+00	-1.25290593E-02	
1.00000000E+02	7.98067173E+06	2.15220163E+05		-1.22642499E-02	2.06228603E+00	-1.28903212E-02	
1.50000000E+02	2.15962168E+07	3.16599212E+05		-1.19768857E-02	1.41531977E+00	-1.29062981E-02	
2.00000000E+02	3.86148094E+07	3.57434065E+05		-1.13780794E-02	7.79830517E-01	-1.24370617E-02	
2.50000000E+02	5.70482045E+07	3.76850714E+05		-1.04230921E-02	1.78394732E-01	-1.15500128E-02	
3.00000000E+02	7.57779509E+07	3.54857902E+05		-9.09316647E-03	-3.67348568E-01	-1.01643096E-02	
3.50000000E+02	9.06747011E+07	2.24527334E+05		-7.41775494E-03	-8.26531419E-01	-8.10193389E-03	
4.00000000E+02	9.67818147E+07	7.45463549E+03		-5.52507105E-03	-1.16928675E+00	-5.54800472E-03	
4.50000000E+02	9.05783019E+07	-2.16086505E+05		-3.63044199E-03	-1.37843640E+00	-2.95922721E-03	
5.00000000E+02	7.96394316E+07	-2.21533842E+05		-1.92781037E-03	-1.48233616E+00	-1.23294387E-03	
5.50000000E+02	6.84209911E+07	-2.27218254E+05		-4.46732151E-04	-1.50540296E+00	2.73004300E-04	
6.00000000E+02	5.69184339E+07	-2.32854523E+05		8.07132037E-04	-1.45881701E+00	1.55208066E-03	
6.50000000E+02	4.51404045E+07	-2.38200416E+05		1.82816611E-03	-1.35408280E+00	2.59789672E-03	
7.00000000E+02	3.31065594E+07	-2.43057884E+05		2.61104069E-03	-1.20301519E+00	3.40446344E-03	
7.50000000E+02	2.08453293E+07	-2.47274198E+05		3.15091105E-03	-1.01771410E+00	3.96639880E-03	
8.00000000E+02	8.39162664E+06	-2.50742965E+05		3.44356973E-03	-8.10529900E-01	4.27909010E-03	
8.50000000E+02	-4.21549339E+06	-2.53405002E+05		3.48555290E-03	-5.94021841E-01	4.33881021E-03	
9.00000000E+02	-1.69352116E+07	-2.55249037E+05		3.27419948E-03	-3.80911854E-01	4.14278658E-03	
9.48000000E+02	-2.92147582E+07	-2.56283784E+05		2.83123916E-03	-1.91437703E-01	3.71232343E-03	
9.62000000E+02	-3.28040257E+07	-2.56459735E+05		2.65758772E-03	-1.40634274E-01	3.54193163E-03	
1.00000000E+03	-4.25700555E+07	-2.57242701E+05		2.53891636E-03	-5.61322198E-03	3.56195650E-03	
1.05000000E+03	-5.54197010E+07	-2.56321982E+05		2.29410181E-03	1.72783068E-01	3.57108497E-03	
1.10000000E+03	-6.81450550E+07	-2.52852120E+05		1.89303300E-03	3.51350488E-01	3.57871380E-03	
1.15000000E+03	-8.07489403E+07	-2.51198996E+05		1.33322930E-03	5.16427817E-01	3.00788928E-03	
1.15500000E+03	-8.19990080E+07	-2.48816850E+05		1.27204512E-03	5.31275180E-01	2.93082412E-03	
1.18600000E+03	-8.93267093E+07	-2.11383355E+05		8.87812431E-04	6.11842858E-01	2.03042516E-03	
1.20000000E+03	-9.20370540E+07	-1.75560579E+05		7.33857148E-04	6.37850419E-01	1.68283325E-03	
1.25000000E+03	-9.63001822E+07	7.68534330E+03		1.21310189E-04	6.83705356E-01	7.73939420E-05	
1.28000000E+03	-9.48130273E+07	9.12446115E+04		-2.49394680E-04	6.73271657E-01	-7.70792460E-04	
1.30000000E+03	-9.26963717E+07	1.20303109E+05		-4.29785242E-04	6.57065718E-01	-9.64465726E-04	

1.35000000E+03	-8.62454928E+07	1.37454328E+05	-8.60277701E-04	5.96014325E-01	-1.47118583E-03
1.40000000E+03	-7.89843411E+07	1.52603430E+05	-1.25776843E-03	5.10645901E-01	-1.93600590E-03
1.45000000E+03	-7.10291129E+07	1.65117076E+05	-1.61862851E-03	4.03220010E-01	-2.35248218E-03
1.50000000E+03	-6.25260594E+07	1.74427767E+05	-1.93986123E-03	2.76296040E-01	-2.71509575E-03
1.55000000E+03	-5.36480930E+07	1.80013576E+05	-2.28162508E-03	1.22389218E-01	-4.08176084E-03
1.60000000E+03	-4.46087374E+07	1.80892155E+05	-2.79879887E-03	-9.54115216E-02	-4.60772042E-03
1.65000000E+03	-3.56002025E+07	1.78859884E+05	-3.22086457E-03	-3.36383670E-01	-5.00946341E-03
1.68000000E+03	-3.03052838E+07	1.72816811E+05	-3.42889329E-03	-4.89162809E-01	-5.15706139E-03
1.70000000E+03	-2.69339991E+07	1.63458311E+05	-3.54933172E-03	-5.92681507E-01	-5.18391483E-03
1.74000000E+03	-2.05701242E+07	1.20571380E+05	-3.96456608E-03	-8.63986448E-01	-5.95511253E-03
1.75000000E+03	-1.98674879E+07	1.13708085E+05	-4.01308298E-03	-8.99512866E-01	-5.88790714E-03
1.80000000E+03	-1.52508619E+07	7.86233942E+04	-4.36129729E-03	-1.18499471E+00	-5.64389752E-03
1.85000000E+03	-1.15766617E+07	6.79633683E+04	-4.62868422E-03	-1.46968062E+00	-5.72575231E-03
1.90000000E+03	-8.49282289E+06	5.50069114E+04	-4.82829935E-03	-1.75589150E+00	-5.70700400E-03
1.95000000E+03	-6.11414746E+06	3.97610827E+04	-4.97309852E-03	-2.03893731E+00	-5.60173223E-03
2.00000000E+03	-4.23113964E+06	3.54669370E+04	-5.07619354E-03	-2.31294838E+00	-5.63123168E-03
2.05000000E+03	-2.57609693E+06	3.06183502E+04	-5.14386786E-03	-2.60135132E+00	-5.61820326E-03
2.08000000E+03	-1.70527325E+06	2.74434234E+04	-5.16946443E-03	-2.76953754E+00	-5.59206103E-03
2.10000000E+03	-1.32960448E+06	1.76613994E+04	-5.18157411E-03	-2.87882648E+00	-5.45245447E-03
2.12000000E+03	-9.99352486E+05	1.53495112E+04	-5.19085912E-03	-2.98761059E+00	-5.42534600E-03
2.20000000E+03	-2.38689070E+05	4.34788274E+03	-5.20851378E-03	-3.41529316E+00	-5.27389548E-03
2.25000000E+03	-6.77089693E+04	2.46532940E+03	-5.21507974E-03	-3.68211565E+00	-5.33834620E-03
2.30000000E+03	-6.43354087E-26	1.70767028E-08	-5.21693235E-03	-3.94787349E+00	-5.21693235E-03

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Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
6.95114743E+01	4.83184506E+03	1.67761658E+03	1.67761658E+03	1.67761658E+03	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.		-3.22839873E-03	7.30026833E-01	-3.22839873E-03
5.00000000E+01	9.95189750E+05	5.71810547E+04		-3.22330202E-03	5.65794297E-01	-3.38814522E-03
1.00000000E+02	6.90087200E+06	1.81510228E+05		-3.15500411E-03	3.88729408E-01	-3.68301391E-03
1.50000000E+02	1.80722340E+07	2.53358221E+05		-2.91120802E-03	2.03486003E-01	-3.65496942E-03
2.00000000E+02	3.13391524E+07	2.71589787E+05		-2.41855176E-03	3.00066438E-02	-3.22320028E-03
2.50000000E+02	4.48196511E+07	2.62990578E+05		-1.65626600E-03	-1.13112465E-01	-2.44270348E-03
3.00000000E+02	5.58172610E+07	1.51216900E+05		-6.40886571E-04	-2.04497682E-01	-1.09733671E-03
3.50000000E+02	5.85861753E+07	-4.21895330E+04		5.19347209E-04	-2.16141296E-01	6.47907015E-04
4.00000000E+02	5.20737561E+07	-2.07239543E+05		1.63977497E-03	-1.41656850E-01	2.27733315E-03
4.50000000E+02	3.95018898E+07	-2.71909965E+05		2.56103575E-03	3.29131161E-03	3.40565114E-03
5.00000000E+02	2.59310959E+07	-2.70431323E+05		3.21524290E-03	1.91188677E-01	4.06348200E-03
5.50000000E+02	1.25115672E+07	-2.65791858E+05		3.59928319E-03	4.04968819E-01	4.44120537E-03
6.00000000E+02	-5.90352806E+05	-2.57695834E+05		3.71782072E-03	6.30695339E-01	4.54224171E-03
6.50000000E+02	-1.31989569E+07	-2.46063715E+05		3.57895811E-03	8.54704183E-01	4.37409850E-03
7.00000000E+02	-2.51398501E+07	-2.31026286E+05		3.19431655E-03	1.06381126E+00	3.94846411E-03
7.50000000E+02	-3.62502514E+07	-2.12915519E+05		2.57890573E-03	1.24551925E+00	3.28108170E-03
8.00000000E+02	-4.63887580E+07	-1.92252275E+05		1.75079295E-03	1.38821275E+00	2.39141189E-03
8.50000000E+02	-5.54444214E+07	-1.69731116E+05		7.30583482E-04	1.48133155E+00	1.30209673E-03
9.00000000E+02	-6.33450001E+07	-1.46202636E+05		-4.59272491E-04	1.51551246E+00	3.82405488E-05
9.48000000E+02	-6.98180423E+07	-1.23582725E+05		-1.73937579E-03	1.48537892E+00	-1.31450773E-03
9.62000000E+02	-7.15028490E+07	-1.17119524E+05		-2.13511650E-03	1.46406935E+00	-1.73125607E-03
1.00000000E+03	-7.47261245E+07	-6.37001841E+04		-2.36534212E-03	1.39052695E+00	-2.11200997E-03
1.05000000E+03	-7.68996566E+07	-1.40453688E+04		-2.74348845E-03	1.27265642E+00	-2.67351514E-03
1.10000000E+03	-7.56078718E+07	5.52608666E+04		-3.23768377E-03	1.11575864E+00	-3.60608955E-03
1.15000000E+03	-7.24329808E+07	7.12207510E+04		-3.79472853E-03	9.18682862E-01	-4.26953353E-03
1.15500000E+03	-7.20340901E+07	8.82674332E+04		-3.84904480E-03	8.96914033E-01	-4.43749435E-03
1.16000000E+03	-6.69825525E+07	2.98388649E+05		-4.16359601E-03	7.40804216E-01	-5.77650762E-03
1.20000000E+03	-6.16249619E+07	4.63515005E+05		-4.27304384E-03	6.52777221E-01	-6.77853036E-03
1.25000000E+03	-2.38212512E+07	9.69648873E+05		-4.56254724E-03	2.14840482E-01	-1.01033979E-02
1.28000000E+03	6.12285844E+06	1.00055709E+06		-4.59709849E-03	-9.39527668E-02	-1.03145676E-02
1.30000000E+03	2.58562246E+07	9.67399115E+05		-4.56624309E-03	-2.73353105E-01	-8.86579472E-03

1.35000000E+03	7.30441927E+07	9.11983939E+05	-4.32739086E-03	-7.06364138E-01	-8.38065281E-03
1.40000000E+03	1.16269746E+08	8.09561853E+05	-3.87025618E-03	-1.10428534E+00	-7.46830886E-03
1.45000000E+03	1.53300944E+08	6.65249823E+05	-3.21935696E-03	-1.44685105E+00	-6.17602284E-03
1.50000000E+03	1.82216315E+08	4.86295842E+05	-2.40923794E-03	-1.71665829E+00	-4.57055280E-03
1.55000000E+03	2.01501839E+08	2.81518929E+05	-1.25396496E-03	-1.91574677E+00	-4.06915425E-03
1.60000000E+03	2.16816515E+08	1.34391884E+05	9.22957190E-04	-2.01756536E+00	-4.20961647E-04
1.65000000E+03	2.15917610E+08	6.10248509E+04	3.17214933E-03	-1.96642379E+00	2.56190082E-03
1.68000000E+03	2.16325588E+08	-5.10315464E+04	4.53890163E-03	-1.85484369E+00	5.04921709E-03
1.70000000E+03	2.14092367E+08	-1.78459524E+05	5.44593927E-03	-1.73264691E+00	7.23053450E-03
1.74400000E+03	1.98531194E+08	-5.28810069E+05	9.10018438E-03	-1.15370997E+00	1.78304569E-02
1.75000000E+03	1.95248707E+08	-5.64178206E+05	9.57276264E-03	-1.04353094E+00	1.88749589E-02
1.80000000E+03	1.63543342E+08	-6.58976749E+05	1.31679005E-02	4.75559802E-02	2.39179291E-02
1.85000000E+03	1.30974479E+08	-6.36789263E+05	1.61112338E-02	1.31077212E+00	2.63903179E-02
1.90000000E+03	1.00592176E+08	-5.71013845E+05	1.84214208E-02	2.66454626E+00	2.75430477E-02
1.95000000E+03	7.46327980E+07	-4.59730729E+05	2.01643965E-02	4.04398188E+00	2.74328665E-02
2.00000000E+03	5.25625245E+07	-4.21196150E+05	2.14331387E-02	5.43294222E+00	2.80246277E-02
2.05000000E+03	3.27030129E+07	-3.71280206E+05	2.22816344E-02	6.83672029E+00	2.80334579E-02
2.08000000E+03	2.20857454E+07	-3.35856098E+05	2.26093042E-02	7.67439749E+00	2.77810950E-02
2.10000000E+03	1.73529099E+07	-2.23559665E+05	2.27667126E-02	8.20095800E+00	2.61955418E-02
2.12000000E+03	1.31542942E+07	-1.96019419E+05	2.28883743E-02	8.72183549E+00	2.58828658E-02
2.20000000E+03	3.23976290E+06	-5.84341709E+04	2.31236498E-02	1.07149093E+01	2.40023591E-02
2.25000000E+03	9.27520141E+05	-3.36017651E+04	2.32131093E-02	1.19576973E+01	2.48931976E-02
2.30000000E+03	6.03864043E-24	3.19207130E-06	2.32385241E-02	1.31868958E+01	2.32385241E-02

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Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.01782077E+02	1.03595911E+04	1.67761658E+03	1.67761658E+03	1.67761658E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-8.90379179E-03	1.70634210E+00	-8.90379179E-03
5.00000000E+01	4.87068773E+06	2.77031225E+05	-8.87871475E-03	1.24738943E+00	-9.67734837E-03
1.00000000E+02	3.25453287E+07	8.27326607E+05	-8.55187579E-03	7.29113126E-01	-1.09585531E-02
1.50000000E+02	8.14761336E+07	1.06807491E+06	-7.43138093E-03	1.82420748E-01	-1.05668343E-02
2.00000000E+02	1.35114921E+08	1.05170285E+06	-5.26395634E-03	-2.97626446E-01	-8.37987300E-03
2.50000000E+02	1.83890632E+08	8.67884736E+05	-2.05863717E-03	-6.29925753E-01	-4.65392817E-03
3.00000000E+02	2.06609454E+08	-1.14556135E+05	1.92631214E-03	-7.03345607E-01	2.27210129E-03
3.50000000E+02	1.70756778E+08	-1.22216121E+06	5.79297450E-03	-3.98472639E-01	9.51714012E-03
4.00000000E+02	9.92039936E+07	-1.45386805E+06	8.51217820E-03	1.84286474E-01	1.29849031E-02
4.50000000E+02	4.45732738E+07	-7.58840187E+05	9.87995259E-03	8.17413737E-01	1.22370861E-02
5.00000000E+02	7.49022852E+06	-7.20979913E+05	1.03974332E-02	1.44318502E+00	1.26588700E-02
5.50000000E+02	-2.71718768E+07	-6.61996071E+05	1.01957005E-02	2.07015227E+00	1.22926390E-02
6.00000000E+02	-5.83606971E+07	-5.82494748E+05	9.33368761E-03	2.66028108E+00	-1.11972059E-02
6.50000000E+02	-8.51091826E+07	-4.84301777E+05	7.89074288E-03	3.17909232E+00	9.45573552E-03
7.00000000E+02	-1.06533249E+08	-3.70323525E+05	5.96481626E-03	3.59683352E+00	7.17367690E-03
7.50000000E+02	-1.21941541E+08	-2.44370475E+05	3.66956745E-03	3.88951560E+00	4.47547900E-03
8.00000000E+02	-1.30845548E+08	-1.10949081E+05	1.13057285E-03	4.03975893E+00	1.50027502E-03
8.50000000E+02	-1.32994076E+08	2.49708984E+04	-1.51916151E-03	4.03740219E+00	-1.60324273E-03
9.00000000E+02	-1.28393243E+08	1.58205012E+05	-4.14414893E-03	3.87984010E+00	-4.68250486E-03
9.48000000E+02	-1.17867262E+08	2.78805657E+05	-6.51751571E-03	3.58713185E+00	-7.47602848E-03
9.62000000E+02	-1.13730469E+08	3.11992550E+05	-7.16620613E-03	3.47707501E+00	-8.24204251E-03
1.00000000E+03	-9.57158414E+07	5.78761672E+05	-7.49715487E-03	3.13130371E+00	-9.79885835E-03
1.05000000E+03	-6.20692675E+07	8.05759869E+05	-7.89093189E-03	2.59586888E+00	-1.19051868E-02
1.10000000E+03	-1.34446027E+07	1.09049798E+06	-8.13524186E-03	1.91282264E+00	-1.54052284E-02
1.15000000E+03	4.24677815E+07	1.14164203E+06	-8.02773453E-03	1.13424684E+00	-1.56386814E-02
1.15500000E+03	4.82875118E+07	1.18572109E+06	-7.99362980E-03	1.05539341E+00	-1.58984370E-02
1.18600000E+03	8.99786206E+07	1.59268792E+06	-7.69103091E-03	5.45607238E-01	-1.63001548E-02
1.20000000E+03	1.13937887E+08	1.81017339E+06	-7.51843946E-03	3.09584221E-01	-1.73031605E-02
1.25000000E+03	2.04614336E+08	1.46980326E+06	-6.48136305E-03	-5.61042345E-01	-1.48802388E-02
1.28000000E+03	2.37326353E+08	6.44423532E+05	-5.61800955E-03	-9.29773352E-01	-9.30042973E-03
1.30000000E+03	2.46416199E+08	2.55058507E+05	-5.15162843E-03	-1.07789779E+00	-6.28522180E-03

1.35000000E+03	2.52086249E+08	-3.83604807E+04	-3.94741490E-03	-1.33069733E+00	-3.77692388E-03
1.40000000E+03	2.41821737E+08	-3.77200022E+05	-2.75333538E-03	-1.45238180E+00	-1.07689084E-03
1.45000000E+03	2.14151130E+08	-7.29078488E+05	-1.65018985E-03	-1.43893506E+00	1.59015898E-03
1.50000000E+03	1.69231419E+08	-1.06201397E+06	-7.21920620E-04	-1.29769436E+00	3.99814149E-03
1.55000000E+03	1.08755780E+08	-1.34536335E+06	8.40107597E-05	-9.72899147E-01	1.35376443E-02
1.60000000E+03	3.74146436E+07	-1.46126468E+06	8.58444072E-04	-2.32786447E-01	1.54710908E-02
1.65000000E+03	-3.55411733E+07	-1.44530130E+06	8.67672910E-04	5.43126508E-01	1.53206859E-02
1.68000000E+03	-7.77561215E+07	-1.34401104E+06	5.08332286E-04	9.86582310E-01	1.39484427E-02
1.70000000E+03	-1.03085872E+08	-1.17224712E+06	1.26417010E-04	1.24640390E+00	1.18488882E-02
1.74400000E+03	-1.38697866E+08	-3.49222737E+05	-2.05535758E-03	1.79749296E+00	3.71005774E-03
1.75000000E+03	-1.40414059E+08	-2.24725551E+05	-2.39044119E-03	1.81247383E+00	1.31484407E-03
1.80000000E+03	-1.34374712E+08	3.16710371E+05	-5.18319599E-03	1.52392668E+00	-1.03497600E-02
1.85000000E+03	-1.16167475E+08	4.04234413E+05	-7.69592544E-03	9.05036661E-01	-1.42210976E-02
1.90000000E+03	-9.47905863E+07	4.41553867E+05	-9.80862522E-03	1.22395575E-01	-1.68622014E-02
1.95000000E+03	-7.30074909E+07	4.19324054E+05	-1.14847575E-02	-7.57951330E-01	-1.81143868E-02
2.00000000E+03	-5.25054352E+07	3.98053648E+05	-1.27381149E-02	-1.68773568E+00	-1.89674365E-02
2.05000000E+03	-3.34774140E+07	3.60285914E+05	-1.35947962E-02	-2.64394358E+00	-1.91762976E-02
2.08000000E+03	-2.31140182E+07	3.29607143E+05	-1.39334244E-02	-3.21725016E+00	-1.90089887E-02
2.10000000E+03	-1.83085170E+07	2.28205580E+05	-1.40987972E-02	-3.57149018E+00	-1.75988828E-02
2.12000000E+03	-1.40017807E+07	2.02062031E+05	-1.42276898E-02	-3.92073796E+00	-1.73144914E-02
2.20000000E+03	-3.55583141E+06	6.35132867E+04	-1.44812853E-02	-5.22986264E+00	-1.54363723E-02
2.25000000E+03	-1.02622619E+06	3.70298409E+04	-1.45798353E-02	-6.04874731E+00	-1.64313274E-02
2.30000000E+03	9.03329989E-23	-5.03824063E-05	-1.46080167E-02	-6.85363705E+00	-1.46080167E-02

Saturn 1B/Centaur

t = 100

Mode 5

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.26351495E+02	1.59647003E+04	1.67761658E+03	1.67761658E+03	1.67761658E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.35815741E-02	2.28668471E+00	-1.35815741E-02
5.00000000E+01	9.83978599E+06	5.54199958E+05	-1.35306573E-02	1.57980645E+00	-1.51283210E-02
1.00000000E+02	6.33767733E+07	1.55394250E+06	-1.28847212E-02	7.59797885E-01	-1.74051103E-02
1.50000000E+02	1.51281175E+08	1.83286120E+06	-1.07605267E-02	-9.56066271E-02	-1.61410958E-02
2.00000000E+02	2.38553771E+08	1.61186288E+06	-6.84373093E-03	-8.00352427E-01	-1.16192532E-02
2.50000000E+02	3.05848763E+08	1.00488344E+06	-1.34914379E-03	-1.21103913E+00	-4.35411074E-03
3.00000000E+02	2.99082801E+08	-1.60247449E+06	4.91340079E-03	-1.10090769E+00	9.75049041E-03
3.50000000E+02	1.54475564E+08	-3.77969367E+06	9.63200053E-03	-2.86254687E-01	2.11494706E-02
4.00000000E+02	-2.86814233E+07	-3.01013502E+06	1.08253739E-02	8.01301290E-01	2.00858468E-02
4.50000000E+02	-1.01490945E+08	-2.38962623E+05	9.25510882E-03	1.53394633E+00	9.99738213E-03
5.00000000E+02	-1.11253665E+08	-1.47747846E+05	7.12005486E-03	1.97460168E+00	7.58348306E-03
5.50000000E+02	-1.15939455E+08	-3.69763714E+04	4.83888554E-03	2.28872204E+00	4.95601188E-03
6.00000000E+02	-1.14737956E+08	8.65879625E+04	2.52180707E-03	2.46879860E+00	2.24479470E-03
6.50000000E+02	-1.07183819E+08	2.15967912E+05	2.91800523E-04	2.51420339E+00	-4.06087052E-04
7.00000000E+02	-9.31582205E+07	3.44343528E+05	-1.72232435E-03	2.43170082E+00	-2.84637754E-03
7.50000000E+02	-7.28713491E+07	4.65438822E+05	-3.39271681E-03	2.23555415E+00	-4.92769160E-03
8.00000000E+02	-4.68256016E+07	5.73903701E+05	-4.59872915E-03	1.94723996E+00	-6.51107886E-03
8.50000000E+02	-1.57602046E+07	6.65071712E+05	-5.23223693E-03	1.59480563E+00	-7.47366565E-03
9.00000000E+02	1.94210828E+07	7.38276518E+05	-5.20167894E-03	1.21192645E+00	-7.71396055E-03
9.48000000E+02	5.61562788E+07	7.89368298E+05	-4.48005873E-03	8.51088240E-01	-7.19384725E-03
9.62000000E+02	6.72903054E+07	8.00968974E+05	-4.13448411E-03	7.52378058E-01	-6.89644609E-03
1.00000000E+03	9.96142072E+07	8.80319863E+05	-3.87212487E-03	4.80069221E-01	-7.37310876E-03
1.05000000E+03	1.44436888E+08	9.11929928E+05	-3.26191997E-03	1.00976275E-01	-7.80510878E-03
1.10000000E+03	1.89890850E+08	8.98629048E+05	-2.17479655E-03	-2.98411714E-01	-8.16565687E-03
1.15000000E+03	2.34269444E+08	8.73357727E+05	-5.79415415E-04	-6.64514977E-01	-6.40180026E-03
1.15500000E+03	2.38531543E+08	8.31162514E+05	-4.01657468E-04	-6.95382983E-01	-5.94274090E-03
1.18600000E+03	2.57244495E+08	1.45510414E+05	7.16717969E-04	-8.12795538E-01	-6.98248084E-03
1.20000000E+03	2.54857083E+08	-4.83163090E+05	1.15246606E-03	-7.86801540E-01	3.76415844E-03
1.25000000E+03	1.70136282E+08	-2.55574929E+06	2.58093912E-03	-2.07026467E-01	1.71852208E-02
1.28000000E+03	9.26969846E+07	-2.45977672E+06	3.08867579E-03	3.21275185E-01	1.71445428E-02
1.30000000E+03	4.59649146E+07	-2.18667764E+06	3.22113003E-03	5.92220201E-01	1.29396973E-02

1.35000000E+03	-5.58920789E+07	-1.84938831E+06	3.19050198E-03	1.20725200E+00	1.14100056E-02
1.40000000E+03	-1.35455168E+08	-1.30188643E+06	2.71955070E-03	1.71021313E+00	8.50571261E-03
1.45000000E+03	-1.83457307E+08	-5.97650886E+05	1.93880807E-03	2.04097796E+00	4.59503423E-03
1.50000000E+03	-1.93802565E+08	1.91295903E+05	1.01610821E-03	2.16103746E+00	1.65904193E-04
1.55000000E+03	-1.64281643E+08	9.81537356E+05	-5.37659101E-05	2.00684065E+00	-9.86913947E-03
1.60000000E+03	-1.00349155E+08	1.42541661E+06	-1.46676494E-03	1.32666000E+00	-1.57209310E-02
1.65000000E+03	-2.63712127E+07	1.53037377E+06	-2.13843774E-03	4.93505098E-01	-1.74421755E-02
1.68000000E+03	2.02302002E+07	1.56641278E+06	-2.15847267E-03	-3.76990210E-02	-1.78226005E-02
1.70000000E+03	5.11969832E+07	1.51359148E+06	-2.00774528E-03	-3.89245321E-01	-1.71436600E-02
1.74400000E+03	1.04947089E+08	7.61065239E+05	-5.84432688E-04	-1.34181366E+00	-1.31490705E-02
1.75000000E+03	1.09070844E+08	6.14684752E+05	-3.27435614E-04	-1.41259219E+00	-1.04623862E-02
1.80000000E+03	1.17469709E+08	-1.03068841E+05	1.99828726E-03	-1.50073326E+00	3.67967130E-03
1.85000000E+03	1.08403720E+08	-2.53998861E+05	4.26962554E-03	-1.20526919E+00	8.36968787E-03
1.90000000E+03	9.28296814E+07	-3.59534282E+05	6.29077441E-03	-6.89944849E-01	1.20341335E-02
1.95000000E+03	7.35431191E+07	-3.99775077E+05	7.95786758E-03	-2.56418081E-02	1.42784222E-02
2.00000000E+03	5.37006605E+07	-3.90590137E+05	9.22954133E-03	7.17817895E-01	1.53420630E-02
2.05000000E+03	3.48270555E+07	-3.60861702E+05	1.01123415E-02	1.49682784E+00	1.57027629E-02
2.08000000E+03	2.44013431E+07	-3.32922391E+05	1.04660737E-02	1.96686305E+00	1.55934889E-02
2.10000000E+03	1.94287025E+07	-2.37006096E+05	1.06418897E-02	2.25443921E+00	1.42769526E-02
2.12000000E+03	1.49412038E+07	-2.11236901E+05	1.07790258E-02	2.53740055E+00	1.40059874E-02
2.20000000E+03	3.86600457E+06	-6.86455953E+04	1.10517387E-02	3.58107706E+00	1.20840033E-02
2.25000000E+03	1.12111944E+06	-4.03589254E+04	1.11591230E-02	4.23660246E+00	1.31770693E-02
2.30000000E+03	-5.91094143E-26	-1.80506860E-08	1.11899498E-02	4.87751326E+00	1.11899498E-02

\$AS001

CASE VI 120 SECOND BURN

N=+5,WOSQ=0.,DWOS=10.,H=0.,

CODEI=1,CODEII=1,P=0.,

ACC=0.,

OUTST=0.,50.,100.,150.,200.,250.,300.,

350.,400.,450.,500.,550.,600.,650.,700.,

750.,800.,850.,900.,948.,962.,1000.,

1050.,1100.,1150.,1155.,1186.,1200.,1250.,

1280.,1300.,1350.,1400.,1450.,1500.,1550.,

1600.,1650.,1680.,1700.,1744.,1750.,1800.,

1850.,1900.,1950.,2000.,2050.,2080.,2100.,

2120.,2200.,2250.,2300.,

RHOAC=2080.,900.,2120.,100.,

\$END

Seturn 1B/Centaur

t = 120

Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.66255878E+01	2.76410168E+02	1.26349741E+03	1.26349741E+03	1.26349741E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-5.27729705E-03	1.61174354E+00	-5.27729705E-03
5.00000000E+01	1.29855686E+05	7.55938042E+03	-5.27663666E-03	1.34751161E+00	-5.29842906E-03
1.00000000E+02	9.41873021E+05	2.57202723E+04	-5.26747285E-03	1.08148798E+00	-5.34229264E-03
1.50000000E+02	2.58963068E+06	3.87350730E+04	-5.23323815E-03	8.14015839E-01	-5.34694928E-03
2.00000000E+02	4.69498803E+06	4.46785692E+04	-5.16087438E-03	5.47777662E-01	-5.29324513E-03
2.50000000E+02	7.03271747E+06	4.86243734E+04	-5.04392849E-03	2.85503987E-01	-5.18933305E-03
3.00000000E+02	9.57512124E+06	5.29332390E+04	-4.87824765E-03	2.95987522E-02	-5.03802730E-03
3.50000000E+02	1.21839402E+07	5.14516316E+04	-4.66048049E-03	-2.16998439E-01	-4.81726373E-03
4.00000000E+02	1.47491545E+07	5.11800601E+04	-4.39112619E-03	-4.51356420E-01	-4.54857812E-03
4.50000000E+02	1.72903891E+07	5.06765539E+04	-4.07062878E-03	-6.70986736E-01	-4.22804190E-03
5.00000000E+02	1.98136579E+07	4.99840107E+04	-3.69947058E-03	-8.73306253E-01	-3.85625121E-03
5.50000000E+02	2.22919155E+07	4.91190674E+04	-3.27834274E-03	-1.05576961E+00	-3.43393228E-03
6.00000000E+02	2.47230050E+07	4.81006217E+04	-2.80810865E-03	-1.21587237E+00	-2.96199225E-03
6.50000000E+02	2.70997700E+07	4.69497916E+04	-2.28978497E-03	-1.35115956E+00	-2.44150045E-03
7.00000000E+02	2.94161647E+07	4.56898674E+04	-1.72452060E-03	-1.45923333E+00	-1.87366771E-03
7.50000000E+02	3.16673608E+07	4.43462579E+04	-1.11357335E-03	-1.53775941E+00	-1.25982327E-03
8.00000000E+02	3.38498523E+07	4.29464306E+04	-4.58284536E-04	-1.58447246E+00	-6.01389719E-04
8.50000000E+02	3.59615568E+07	4.15198486E+04	2.39948470E-04	-1.59718002E+00	1.00144150E-04
9.00000000E+02	3.80019134E+07	4.00979036E+04	9.79701702E-04	-1.57376513E+00	8.43252522E-04
9.48000000E+02	3.98944957E+07	3.87680490E+04	1.72760939E-03	-1.51540813E+00	1.59432777E-03
9.62000000E+02	4.04346033E+07	3.83911695E+04	1.95253333E-03	-1.49151030E+00	1.82014999E-03
1.00000000E+03	4.18219392E+07	3.52771828E+04	2.08173260E-03	-1.42005966E+00	1.94143718E-03
1.05000000E+03	4.35264451E+07	3.23555846E+04	2.29411107E-03	-1.31845988E+00	2.13291719E-03
1.10000000E+03	4.50248524E+07	2.81889692E+04	2.58036254E-03	-1.20556551E+00	2.39243608E-03
1.15000000E+03	4.64082477E+07	2.71659892E+04	2.92412806E-03	-1.07721922E+00	2.74302146E-03
1.15500000E+03	4.65411973E+07	2.60163168E+04	2.95907182E-03	-1.06339759E+00	2.78562970E-03
1.18600000E+03	4.71843699E+07	1.08767932E+04	3.16945146E-03	-9.72494310E-01	3.11065798E-03
1.20000000E+03	4.72459043E+07	-1.98556447E+03	3.24959958E-03	-9.27893695E-01	3.26033236E-03
1.25000000E+03	4.57419450E+07	-5.64799074E+04	3.55104729E-03	-7.49242864E-01	3.87378962E-03
1.28000000E+03	4.37387847E+07	-7.64812235E+04	3.72442934E-03	-6.28644707E-01	4.16146490E-03
1.30000000E+03	4.21471498E+07	-8.25406769E+04	3.80703138E-03	-5.46251071E-01	4.17387883E-03

1.35000000E+03	3.79434555E+07	-8.53772856E+04	3.99961371E-03	-3.32317631E-01	4.37906832E-03
1.40000000E+03	3.36329329E+07	-8.68035032E+04	4.17170092E-03	-1.08790520E-01	4.55749427E-03
1.45000000E+03	2.92875749E+07	-8.67618501E+04	4.32295132E-03	1.22975554E-01	4.70855955E-03
1.50000000E+03	2.49820288E+07	-8.52036523E+04	4.45337590E-03	3.61605763E-01	4.83205880E-03
1.55000000E+03	2.07931639E+07	-8.20860985E+04	4.58760255E-03	6.10428621E-01	5.40846354E-03
1.60000000E+03	1.67839426E+07	-7.90682727E+04	4.78523484E-03	8.85017381E-01	5.57591756E-03
1.65000000E+03	1.28761780E+07	-7.68812193E+04	4.94124549E-03	1.16742849E+00	5.71005769E-03
1.68000000E+03	1.06218855E+07	-7.26228791E+04	5.01538308E-03	1.33935642E+00	5.74161187E-03
1.70000000E+03	9.22215779E+06	-6.69325347E+04	5.05712018E-03	1.45408852E+00	5.72644552E-03
1.74400000E+03	6.71584865E+06	-4.50134160E+04	5.19593967E-03	1.72140484E+00	5.93907867E-03
1.75000000E+03	6.45548887E+06	-4.18151704E+04	5.21174143E-03	1.75692382E+00	5.90119189E-03
1.80000000E+03	4.83911847E+06	-2.64587952E+04	5.32339693E-03	2.04695610E+00	5.75502491E-03
1.85000000E+03	3.61784290E+06	-2.23010720E+04	5.40762006E-03	2.33515434E+00	5.76760508E-03
1.90000000E+03	2.61812971E+06	-1.75963421E+04	5.46958773E-03	2.62322450E+00	5.75067945E-03
1.95000000E+03	1.86730074E+06	-1.23461722E+04	5.51400451E-03	2.90981273E+00	5.70920091E-03
2.00000000E+03	1.28495978E+06	-1.09253025E+04	5.54540871E-03	3.19550753E+00	5.71638371E-03
2.05000000E+03	7.76987544E+05	-9.37142024E+03	5.56589869E-03	3.48124290E+00	5.71107949E-03
2.08000000E+03	5.10667443E+05	-8.37528399E+03	5.57359474E-03	3.65245691E+00	5.70256431E-03
2.10000000E+03	3.97099609E+05	-5.33076063E+03	5.57721655E-03	3.76571192E+00	5.65897669E-03
2.12000000E+03	2.97565729E+05	-4.61911805E+03	5.57998573E-03	3.87880890E+00	5.65054971E-03
2.20000000E+03	7.02802571E+04	-1.28487326E+03	5.58521918E-03	4.32891538E+00	5.60454058E-03
2.25000000E+03	1.98921772E+04	-7.24777904E+02	5.58714975E-03	4.61006160E+00	5.62338864E-03
2.30000000E+03	-3.25489016E-28	-4.73523458E-10	5.58769307E-03	4.89088739E+00	5.58769307E-03

Saturn 1B/Centaur

t = 120
Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
4.58246449E+01	2.09989808E+03	1.26349741E+03	1.26349741E+03	1.26349741E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.52567407E-02	3.24423709E+00	-1.52567407E-02
5.00000000E+01	1.90785889E+06	1.09340749E+05	-1.52469559E-02	2.47600834E+00	-1.55621666E-02
1.00000000E+02	1.31429310E+07	3.44329763E+05	-1.51165993E-02	1.68342316E+00	-1.61182480E-02
1.50000000E+02	3.42994419E+07	4.79304792E+05	-1.46533254E-02	8.75565488E-01	-1.60603782E-02
2.00000000E+02	5.93709219E+07	5.12455085E+05	-1.37192738E-02	9.02147951E-02	-1.52375423E-02
2.50000000E+02	8.46950390E+07	4.90534291E+05	-1.22768320E-02	-6.37176312E-01	-1.37437079E-02
3.00000000E+02	1.04641009E+08	2.22617913E+05	-1.03613322E-02	-1.26472363E+00	-1.10333072E-02
3.50000000E+02	1.04398265E+08	-1.12718625E+05	-8.24021285E-03	-1.72889905E+00	-7.89673703E-03
4.00000000E+02	9.84003859E+07	-1.25105848E+05	-6.21118551E-03	-2.07131788E+00	-5.82630599E-03
4.50000000E+02	9.17778624E+07	-1.40069228E+05	-4.30815539E-03	-2.31327565E+00	-3.87306789E-03
5.00000000E+02	8.43714784E+07	-1.56353311E+05	-2.54530433E-03	-2.46087483E+00	-2.05488410E-03
5.50000000E+02	7.61308450E+07	-1.73340412E+05	-9.38864922E-04	-2.52131522E+00	-3.89791902E-04
6.00000000E+02	6.70351817E+07	-1.90464911E+05	4.94222909E-04	-2.50271637E+00	1.10355861E-03
6.50000000E+02	5.70905557E+07	-2.07219586E+05	1.73687696E-03	-2.41413323E+00	2.40649484E-03
7.00000000E+02	4.63268035E+07	-2.23161942E+05	2.77237946E-03	-2.26554373E+00	3.50085516E-03
7.50000000E+02	3.47941389E+07	-2.37920372E+05	3.58481905E-03	-2.06781115E+00	4.36945875E-03
8.00000000E+02	2.25594615E+07	-2.51199993E+05	4.15946190E-03	-1.83262482E+00	4.99650518E-03
8.50000000E+02	9.70238436E+06	-2.62788002E+05	4.48304615E-03	-1.57242268E+00	5.36789760E-03
9.00000000E+02	-3.68899260E+06	-2.72558467E+05	4.54399430E-03	-1.30029974E+00	5.47148367E-03
9.48000000E+02	-1.69618602E+07	-2.80194868E+05	4.34633253E-03	-1.04051351E+00	5.30962130E-03
9.62000000E+02	-2.08981277E+07	-2.82105696E+05	4.24033705E-03	-9.66828138E-01	5.21311531E-03
1.00000000E+03	-3.19531865E+07	-2.96449889E+05	4.15711542E-03	-7.66198412E-01	5.33608040E-03
1.05000000E+03	-4.69897384E+07	-3.06322026E+05	3.95966594E-03	-4.95948362E-01	5.48574679E-03
1.10000000E+03	-6.25932374E+07	-3.15688467E+05	3.60365013E-03	-2.16329761E-01	5.70823991E-03
1.15000000E+03	-7.83986083E+07	-3.16217100E+05	3.07362208E-03	5.64663754E-02	5.18173608E-03
1.15500000E+03	-7.99783662E+07	-3.15651037E+05	3.01408169E-03	8.22178490E-02	5.11842194E-03
1.18600000E+03	-8.95783634E+07	-2.94722416E+05	2.63416562E-03	2.31419973E-01	4.22725977E-03
1.20000000E+03	-9.35239542E+07	-2.67955307E+05	2.47875315E-03	2.88545719E-01	3.92716022E-03
1.25000000E+03	-1.02626757E+08	-8.27400899E+04	1.84093867E-03	4.48800461E-01	2.31373918E-03
1.28000000E+03	-1.03557319E+08	2.27041532E+04	1.44085283E-03	5.03353771E-01	1.31111481E-03
1.30000000E+03	-1.02702409E+08	6.30873351E+04	1.24239689E-03	5.26383915E-01	9.62008737E-04

1.35000000E+03	-9.88872005E+07	8.97898711E+04	7.57271209E-04	5.59342729E-01	3.58205115E-04
1.40000000E+03	-9.37087712E+07	1.17372926E+05	2.93747219E-04	5.62499213E-01	-2.27910228E-04
1.45000000E+03	-8.71591465E+07	1.44404299E+05	-1.41573262E-04	5.37062899E-01	-7.83370148E-04
1.50000000E+03	-7.93002187E+07	1.69526745E+05	-5.42219533E-04	4.84882046E-01	-1.29567173E-03
1.55000000E+03	-7.02594025E+07	1.91435801E+05	-9.83622336E-04	3.97475897E-01	-2.89798035E-03
1.60000000E+03	-6.03117128E+07	2.02575126E+05	-1.67134303E-03	2.31187588E-01	-3.69709429E-03
1.65000000E+03	-5.01277776E+07	2.04507297E+05	-2.25269213E-03	3.08006402E-02	-4.29776510E-03
1.68000000E+03	-4.39994597E+07	2.03331670E+05	-2.54991988E-03	-1.02618489E-01	-4.58323658E-03
1.70000000E+03	-3.99721289E+07	1.98647516E+05	-2.72666984E-03	-1.95685910E-01	-4.71314500E-03
1.74400000E+03	-3.18605906E+07	1.63336987E+05	-3.35650311E-03	-4.64611624E-01	-6.05307886E-03
1.75000000E+03	-3.09009731E+07	1.56596050E+05	-3.43180901E-03	-5.00811834E-01	-6.01377191E-03
1.80000000E+03	-2.42101971E+07	1.18367714E+05	-3.97965093E-03	-7.96412907E-01	-5.91060875E-03
1.85000000E+03	-1.86147134E+07	1.04728302E+05	-4.40676354E-03	-1.09734928E+00	-6.09729303E-03
1.90000000E+03	-1.38105202E+07	8.67040371E+04	-4.72951385E-03	-1.40331489E+00	-6.11456237E-03
1.95000000E+03	-1.00176819E+07	6.42812816E+04	-4.96592720E-03	-1.70630863E+00	-5.98223204E-03
2.00000000E+03	-6.96330309E+06	5.77165500E+04	-5.13519000E-03	-2.00713967E+00	-6.03842239E-03
2.05000000E+03	-4.26381051E+06	5.00852558E+04	-5.24682519E-03	-2.30895224E+00	-6.02273930E-03
2.08000000E+03	-2.83664909E+06	4.49951466E+04	-5.28927524E-03	-2.48908061E+00	-5.98214784E-03
2.10000000E+03	-2.21617779E+06	2.92056790E+04	-5.30943827E-03	-2.60461184E+00	-5.75737813E-03
2.12000000E+03	-1.66944680E+06	2.54403786E+04	-5.32493057E-03	-2.71933197E+00	-5.71357063E-03
2.20000000E+03	-4.02007819E+05	7.30349280E+03	-5.35451977E-03	-3.16601743E+00	-5.46434673E-03
2.25000000E+03	-1.14394818E+05	4.15683675E+03	-5.36558965E-03	-3.44450980E+00	-5.57343149E-03
2.30000000E+03	4.29371203E-23	-7.69440848E-04	-5.36871885E-03	-3.72123778E+00	-5.36871870E-03

Saturn 1B/Centaur

t = 120
Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.02489151E+01	4.93491007E+03	1.26349741E+03	1.26349741E+03	1.26349741E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-5.23791894E-03	1.04380010E+00	-5.23791894E-03
5.00000000E+01	1.42891168E+06	8.15521014E+04	-5.23057465E-03	7.77866255E-01	-5.46567540E-03
1.00000000E+02	9.69166549E+06	2.50265468E+05	-5.13385390E-03	4.94120637E-01	-5.86187138E-03
1.50000000E+02	2.48069142E+07	3.36892027E+05	-4.79600190E-03	2.00429184E-01	-5.78498613E-03
2.00000000E+02	4.21194193E+07	3.47585715E+05	-4.12756525E-03	-7.51633014E-02	-5.15736956E-03
2.50000000E+02	5.88403033E+07	3.12786649E+05	-3.11509555E-03	-3.07391745E-01	-4.05044139E-03
3.00000000E+02	6.99927265E+07	6.15851547E+04	-1.80575928E-03	-4.64850471E-01	-1.99165486E-03
3.50000000E+02	6.38226934E+07	-2.07935241E+05	-4.43258737E-04	-5.01763119E-01	1.90360846E-04
4.00000000E+02	5.31960764E+07	-2.15549735E+05	7.27562266E-04	-4.61232324E-01	1.39068617E-03
4.50000000E+02	4.22453261E+07	-2.22226824E+05	1.68253351E-03	-3.66214577E-01	2.37282155E-03
5.00000000E+02	3.10048485E+07	-2.27023072E+05	2.41543555E-03	-2.27742177E-01	3.12751966E-03
5.50000000E+02	1.95845196E+07	-2.29335897E+05	2.92152238E-03	-5.73685648E-02	3.64796667E-03
6.00000000E+02	8.11968809E+06	-2.28749695E+05	3.19851581E-03	1.33084430E-01	3.93033226E-03
6.50000000E+02	-3.23826033E+06	-2.25038868E+05	3.24702087E-03	3.31687854E-01	3.97422070E-03
7.00000000E+02	-1.43314226E+07	-2.18168130E+05	3.07075129E-03	5.26584550E-01	3.78292551E-03
7.50000000E+02	-2.50048402E+07	-2.08289865E+05	2.67656510E-03	7.06175859E-01	3.36348608E-03
8.00000000E+02	-3.51157550E+07	-1.95738514E+05	2.07431265E-03	8.59306238E-01	2.72654836E-03
8.50000000E+02	-4.45425110E+07	-1.81022091E+05	1.27650290E-03	9.75436117E-01	1.88603475E-03
9.00000000E+02	-5.31929662E+07	-1.64811092E+05	2.97796332E-04	1.04479365E+00	8.58632095E-04
9.48000000E+02	-6.07157654E+07	-1.48602040E+05	-7.96973115E-04	1.05911952E+00	-2.86090540E-04
9.62000000E+02	-6.27630743E+07	-1.43875536E+05	-1.14274473E-03	1.05260389E+00	-6.46622195E-04
1.00000000E+03	-6.73232202E+07	-1.04307938E+05	-1.34753351E-03	1.02222821E+00	-9.32706549E-04
1.05000000E+03	-7.17693333E+07	-6.63197430E+04	-1.69449645E-03	9.66188705E-01	-1.36409484E-03
1.10000000E+03	-7.35214061E+07	-1.17434921E+04	-2.16544979E-03	8.79965948E-01	-2.08715984E-03
1.15000000E+03	-7.37719854E+07	1.39948553E+03	-2.71959629E-03	7.59518137E-01	-2.72892620E-03
1.15500000E+03	-7.37287957E+07	1.58315861E+04	-2.77505224E-03	7.45493570E-01	-2.88059614E-03
1.18600000E+03	-7.12411335E+07	1.98429368E+05	-3.10246829E-03	6.38871049E-01	-4.17505946E-03
1.20000000E+03	-6.74173625E+07	3.45211823E+05	-3.22040796E-03	5.73934342E-01	-5.08641782E-03
1.25000000E+03	-3.66108848E+07	8.23427315E+05	-3.56909293E-03	2.27324019E-01	-8.27439187E-03
1.28000000E+03	-1.07985728E+07	8.75303054E+05	-3.66135245E-03	-2.88810470E-02	-8.66308419E-03
1.30000000E+03	6.56164365E+06	8.56109432E+05	-3.66536483E-03	-1.79360231E-01	-7.47029564E-03

1.35000000E+03	4.84954128E+07	8.14195767E+05	-3.53217599E-03	-5.46511607E-01	-7.15082384E-03
1.40000000E+03	8.72972977E+07	7.31323718E+05	-3.20409003E-03	-8.88148849E-01	-6.45441767E-03
1.45000000E+03	1.21013462E+08	6.11481739E+05	-2.70094798E-03	-1.18628685E+00	-5.41864460E-03
1.50000000E+03	1.47927210E+08	4.60602297E+05	-2.05143881E-03	-1.42526604E+00	-4.09856013E-03
1.55000000E+03	1.66678041E+08	2.86055181E+05	-1.10275174E-03	-1.60852654E+00	-3.96330355E-03
1.60000000E+03	1.76879611E+08	1.59164875E+05	7.11337396E-04	-1.72076480E+00	-8.80311351E-04
1.65000000E+03	1.83419816E+08	9.47044129E+04	2.61048081E-03	-1.70340951E+00	1.66343668E-03
1.68000000E+03	1.84997177E+08	-5.01695139E+03	3.77548069E-03	-1.62341811E+00	3.82565020E-03
1.70000000E+03	1.83810033E+08	-1.19379487E+05	4.55271960E-03	-1.52825589E+00	5.74651446E-03
1.74400000E+03	1.71542906E+08	-4.39924679E+05	7.70100521E-03	-1.05458783E+00	1.49638441E-02
1.75000000E+03	1.68800750E+08	-4.73073346E+05	8.10945732E-03	-9.61911600E-01	1.59095125E-02
1.80000000E+03	1.41762783E+08	-5.66465236E+05	1.12222834E-02	-3.29841027E-02	2.04631519E-02
1.85000000E+03	1.13709406E+08	-5.49553130E+05	1.37755996E-02	1.04954614E+00	2.26465137E-02
1.90000000E+03	8.74452859E+07	-4.94441087E+05	1.57825554E-02	2.21247727E+00	2.36809753E-02
1.95000000E+03	6.49323845E+07	-3.99370249E+05	1.72984092E-02	3.39922133E+00	2.36125633E-02
2.00000000E+03	4.57524184E+07	-3.66171692E+05	1.84024909E-02	4.59505793E+00	2.41328773E-02
2.05000000E+03	2.84821683E+07	-3.22963465E+05	1.91412360E-02	5.80402378E+00	2.41445430E-02
2.08000000E+03	1.92453794E+07	-2.92222965E+05	1.94266791E-02	6.52549129E+00	2.39265708E-02
2.10000000E+03	1.51241976E+07	-1.94692003E+05	1.95638566E-02	6.97878854E+00	2.25499303E-02
2.12000000E+03	1.14673182E+07	-1.70747590E+05	1.96699035E-02	7.42715287E+00	2.22783298E-02
2.20000000E+03	2.82644879E+06	-5.09669052E+04	1.98750700E-02	9.14194177E+00	2.06414896E-02
2.25000000E+03	8.09356833E+05	-2.93180133E+04	1.99531240E-02	1.02112473E+01	2.14190247E-02
2.30000000E+03	5.39632002E-26	-2.90033974E-09	1.99753023E-02	1.12687156E+01	1.99753023E-02

Saturn 1B/Centaur

t = 120
Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.03288351E+02	1.06684835E+04	1.26349741E+03	1.26349741E+03	1.26349741E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-6.71342646E-03	1.26153456E+00	-6.71342646E-03
5.00000000E+01	3.69711038E+06	2.10013393E+05	-6.69437893E-03	9.15416567E-01	-7.29981160E-03
1.00000000E+02	2.45936673E+07	6.22652886E+05	-6.44696533E-03	5.24580003E-01	-8.25825072E-03
1.50000000E+02	6.12498422E+07	7.96508184E+05	-5.60275199E-03	1.13130423E-01	-7.94099084E-03
2.00000000E+02	1.01045814E+08	7.76086939E+05	-3.97798481E-03	-2.47071419E-01	-6.27732462E-03
2.50000000E+02	1.36799171E+08	6.31041171E+05	-1.58747829E-03	-4.95597957E-01	-3.47452090E-03
3.00000000E+02	1.54646790E+08	-9.78881005E+04	1.38887533E-03	-5.55664278E-01	1.68435180E-03
3.50000000E+02	1.28334607E+08	-7.07353896E+05	4.27210866E-03	-3.31951197E-01	6.42755512E-03
4.00000000E+02	9.27314405E+07	-7.13672827E+05	6.48325511E-03	4.89100813E-02	8.67882038E-03
4.50000000E+02	5.72211820E+07	-7.04003373E+05	7.98197807E-03	5.23272056E-01	1.01687758E-02
5.00000000E+02	2.26228163E+07	-6.76877490E+05	8.77815871E-03	1.05315066E+00	1.09012632E-02
5.50000000E+02	-1.01537355E+07	-6.31026778E+05	8.89902846E-03	1.60112034E+00	1.08978686E-02
6.00000000E+02	-4.01670664E+07	-5.66450761E+05	8.39043769E-03	2.13139344E+00	1.02026280E-02
6.50000000E+02	-6.65059404E+07	-4.84340829E+05	7.31686261E-03	2.61094720E+00	8.88198144E-03
7.00000000E+02	-8.83461784E+07	-3.86965667E+05	5.76022335E-03	3.01061517E+00	7.02340954E-03
7.50000000E+02	-1.05000898E+08	-2.77520507E+05	3.81762793E-03	3.30607977E+00	4.73286526E-03
8.00000000E+02	-1.15962397E+08	-1.59944630E+05	1.59819223E-03	3.47870942E+00	2.13115632E-03
8.50000000E+02	-1.20934251E+08	-3.87133274E+04	-7.80881922E-04	3.51619263E+00	-6.50527631E-04
9.00000000E+02	-1.19852517E+08	8.13879848E+04	-3.19876314E-03	3.41293161E+00	-3.47571837E-03
9.48000000E+02	-1.13281999E+08	1.91109229E+05	-5.44528478E-03	3.18248062E+00	-6.10230386E-03
9.62000000E+02	-1.10392957E+08	2.21465071E+05	-6.07177293E-03	3.09189474E+00	-6.83544558E-03
1.00000000E+03	-9.63268572E+07	4.66356476E+05	-6.39835632E-03	2.80248145E+00	-8.25303049E-03
1.05000000E+03	-6.86517395E+07	6.76832091E+05	-6.81023292E-03	2.34826908E+00	-1.01821762E-02
1.10000000E+03	-2.70105403E+07	9.43650429E+05	-7.12019162E-03	1.75812354E+00	-1.34111945E-02
1.15000000E+03	2.14955920E+07	9.92669096E+05	-7.14246037E-03	1.07666294E+00	-1.37602543E-02
1.15500000E+03	2.65681387E+07	1.03586951E+06	-7.12440483E-03	1.00717722E+00	-1.40302016E-02
1.18600000E+03	6.36238478E+07	1.44851545E+06	-6.92937547E-03	5.52463192E-01	-1.47591887E-02
1.20000000E+03	8.56651450E+07	1.68155529E+06	-6.80316527E-03	3.37149859E-01	-1.58926533E-02
1.25000000E+03	1.72951156E+08	1.47341743E+06	-5.96308385E-03	-4.83171483E-01	-1.43826120E-02
1.28000000E+03	2.06801538E+08	7.16055684E+05	-5.22075085E-03	-8.44685429E-01	-9.31249761E-03
1.30000000E+03	2.17550430E+08	3.49048021E+05	-4.81154748E-03	-9.92815320E-01	-6.36287202E-03

1.35000000E+03	2.28226929E+08	6.71702766E+04	-3.73431326E-03	-1.25412759E+00	-4.03284783E-03
1.40000000E+03	2.23433835E+08	-2.64618227E+05	-2.64193577E-03	-1.39213554E+00	-1.46585477E-03
1.45000000E+03	2.01461388E+08	-6.14620102E+05	-1.61353371E-03	-1.40042678E+00	1.11811119E-03
1.50000000E+03	1.62201480E+08	-9.50932369E+05	-7.32599780E-04	-1.28380477E+00	3.49376631E-03
1.55000000E+03	1.07093681E+08	-1.24254750E+06	5.01088837E-05	-9.89811035E-01	1.24755839E-02
1.60000000E+03	4.06057999E+07	-1.36767757E+06	8.33027324E-04	-2.99926017E-01	1.45098030E-02
1.65000000E+03	-2.78183227E+07	-1.35877497E+06	9.00006180E-04	4.30643957E-01	1.44877559E-02
1.68000000E+03	-6.76020258E+07	-1.27081226E+06	5.97328609E-04	8.51568922E-01	1.33054512E-02
1.70000000E+03	-9.16269289E+07	-1.11605979E+06	2.61033530E-04	1.10056910E+00	1.14216314E-02
1.74400000E+03	-1.25973058E+08	-3.51059762E+05	-1.70410295E-03	1.64123297E+00	4.09164034E-03
1.75000000E+03	-1.27722617E+08	-2.33852475E+05	-2.00867832E-03	1.65896335E+00	1.84709208E-03
1.80000000E+03	-1.23057556E+08	2.79664787E+05	-4.55907294E-03	1.41819941E+00	-9.12130437E-03
1.85000000E+03	-1.06785883E+08	3.64468703E+05	-6.86458776E-03	8.67264516E-01	-1.27478598E-02
1.90000000E+03	-8.73854084E+07	4.02934968E+05	-8.80951519E-03	1.62287489E-01	-1.52461760E-02
1.95000000E+03	-6.74191374E+07	3.85962948E+05	-1.03561503E-02	-6.35838159E-01	-1.64583313E-02
2.00000000E+03	-4.85316076E+07	3.67005722E+05	-1.15140787E-02	-1.48127445E+00	-1.72575172E-02
2.05000000E+03	-3.09764956E+07	3.32591739E+05	-1.23062920E-02	-2.35161006E+00	-1.74587589E-02
2.08000000E+03	-2.14071603E+07	3.04426324E+05	-1.26197489E-02	-2.87359507E+00	-1.73075581E-02
2.10000000E+03	-1.69621576E+07	2.11134283E+05	-1.27729340E-02	-3.19589454E+00	-1.60111899E-02
2.12000000E+03	-1.29767728E+07	1.87023829E+05	-1.28923683E-02	-3.51360708E+00	-1.57494387E-02
2.20000000E+03	-3.29954037E+06	5.89127445E+04	-1.31275173E-02	-4.70333721E+00	-1.40134232E-02
2.25000000E+03	-9.52559677E+05	3.43663736E+04	-1.32189774E-02	-5.44769063E+00	-1.49372961E-02
2.30000000E+03	4.17406773E-24	-4.65102604E-06	-1.32451381E-02	-6.17909139E+00	-1.32451381E-02

Saturn 1B/Centaur

t. = 120
Mode 5

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.35825228E+02	1.84484924E+04	1.26349741E+03	1.26349741E+03	1.26349741E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-5.65862872E-03	9.98291200E-01	-5.65862872E-03
5.00000000E+01	5.00129062E+06	2.82467482E+05	-5.63278811E-03	7.01229288E-01	-6.44709352E-03
1.00000000E+02	3.24655757E+07	8.00768188E+05	-5.30281816E-03	3.45952604E-01	-7.63223756E-03
1.50000000E+02	7.79826649E+07	9.53627420E+05	-4.21063432E-03	-2.87257294E-02	-7.01011427E-03
2.00000000E+02	1.23684598E+08	8.51775101E+05	-2.18541519E-03	-3.27211411E-01	-4.70899895E-03
2.50000000E+02	1.60252628E+08	5.80638507E+05	-6.76588969E-04	-4.76802106E-01	-1.05973134E-03
3.00000000E+02	1.69034783E+08	-4.37979080E+05	4.05747191E-03	-3.85537436E-01	5.37951733E-03
3.50000000E+02	1.25776780E+08	-1.01795021E+06	7.05320526E-03	2.72160088E-02	1.01550998E-02
4.00000000E+02	7.51846475E+07	-1.00374570E+06	9.06152823E-03	5.89200296E-01	1.21494827E-02
4.50000000E+02	2.61873433E+07	-9.49828315E+05	1.00707573E-02	1.22305041E+00	1.30211443E-02
5.00000000E+02	-1.91524828E+07	-8.57282290E+05	1.01333927E-02	1.87344537E+00	1.28223577E-02
5.50000000E+02	-5.89048631E+07	-7.26678854E+05	9.34193158E-03	2.48892797E+00	1.16437592E-02
6.00000000E+02	-9.12426918E+07	-5.61504290E+05	7.82668486E-03	3.02376065E+00	9.62305043E-03
6.50000000E+02	-1.14577784E+08	-3.67749687E+05	5.75232527E-03	3.44018427E+00	6.94068670E-03
7.00000000E+02	-1.27673177E+08	-1.53373710E+05	3.31194107E-03	3.71038525E+00	3.81260449E-03
7.50000000E+02	-1.29725825E+08	7.23400087E+04	7.19131122E-04	3.81803666E+00	4.80560370E-04
8.00000000E+02	-1.20415119E+08	2.99502193E+05	-1.80121869E-03	3.75931103E+00	-2.79921353E-03
8.50000000E+02	-9.99142140E+07	5.18380268E+05	-4.02276098E-03	3.54330038E+00	-5.76823461E-03
9.00000000E+02	-6.88629198E+07	7.20167414E+05	-5.72735519E-03	3.19182091E+00	-8.17801331E-03
9.48000000E+02	-3.00916131E+07	8.91154120E+05	-6.69045401E-03	2.75817925E+00	-9.75417449E-03
9.62000000E+02	-1.72978615E+07	9.36138140E+05	-6.82343839E-03	2.61944779E+00	-1.00515009E-02
1.00000000E+03	2.63874630E+07	1.28527922E+06	-6.81126990E-03	2.19767837E+00	-1.19227550E-02
1.05000000E+03	9.62241329E+07	1.54627323E+06	-6.50536582E-03	1.55171477E+00	-1.42088209E-02
1.10000000E+03	1.81667459E+08	1.81385224E+06	-5.60221087E-03	7.52944520E-01	-1.76945591E-02
1.15000000E+03	2.73052042E+08	1.83306632E+06	-3.89333900E-03	-9.65386953E-02	-1.61137811E-02
1.15500000E+03	2.82195277E+08	1.82327303E+06	-3.68459634E-03	-1.76441295E-01	-1.58397499E-02
1.18600000E+03	3.34566505E+08	1.34412809E+06	-2.29963568E-03	-6.07221562E-01	-9.56519291E-03
1.20000000E+03	3.49288556E+08	7.42945651E+05	-1.71821146E-03	-7.14953963E-01	-5.73413389E-03
1.25000000E+03	3.07776215E+08	-2.26575295E+06	4.85187592E-04	-5.07432340E-01	1.34323473E-02
1.28000000E+03	2.29411709E+08	-2.80431614E+06	1.53004470E-03	-2.86494334E-02	1.75547084E-02
1.30000000E+03	1.73776338E+08	-2.72706416E+06	1.91747419E-03	2.53271380E-01	1.40377593E-02

1.35000000E+03	4.26612827E+07	-2.46768861E+06	2.43255630E-03	9.47385972E-01	1.34000612E-02
1.40000000E+03	-6.82213376E+07	-1.92346158E+06	2.36019718E-03	1.56224091E+00	1.09089153E-02
1.45000000E+03	-1.45800255E+08	-1.14730202E+06	1.83015168E-03	2.01335120E+00	6.92927177E-03
1.50000000E+03	-1.80483657E+08	-2.23788667E+05	1.02728844E-03	2.23963150E+00	2.02190474E-03
1.55000000E+03	-1.67463236E+08	7.41272849E+05	-2.39165778E-05	2.17455766E+00	-7.43664507E-03
1.60000000E+03	-1.11419870E+08	1.31184400E+06	-1.51779457E-03	1.57307430E+00	-1.46362346E-02
1.65000000E+03	-4.18880578E+07	1.47105071E+06	-2.33179664E-03	7.78466754E-01	-1.70423037E-02
1.68000000E+03	3.85143125E+06	1.57722363E+06	-2.45367326E-03	2.48566698E-01	-1.82259096E-02
1.70000000E+03	3.56977767E+07	1.59195636E+06	-2.37053288E-03	-1.18361445E-01	-1.82900965E-02
1.74400000E+03	9.53175198E+07	9.17958641E+05	-1.17363892E-03	-1.18957704E+00	-1.63284735E-02
1.75000000E+03	1.00368427E+08	7.66347359E+05	-9.38633945E-04	-1.27925471E+00	-1.35742046E-02
1.80000000E+03	1.14515326E+08	-1.85377130E+04	1.27654550E-03	-1.50451707E+00	1.57895517E-03
1.85000000E+03	1.08978210E+08	-1.98498904E+05	3.52651140E-03	-1.29425363E+00	6.73069064E-03
1.90000000E+03	9.53710018E+07	-3.36331009E+05	5.58151659E-03	-8.47008419E-01	1.09542164E-02
1.95000000E+03	7.64937474E+07	-4.05570439E+05	7.30595102E-03	-2.23293118E-01	1.37181319E-02
2.00000000E+03	5.62240031E+07	-4.01494136E+05	8.63279062E-03	4.95703238E-01	1.49159539E-02
2.05000000E+03	3.67295442E+07	-3.74346760E+05	9.56006438E-03	1.25570461E+00	1.53593945E-02
2.08000000E+03	2.58931777E+07	-3.46648502E+05	9.93496970E-03	1.71583202E+00	1.52729509E-02
2.10000000E+03	2.06609201E+07	-2.49767723E+05	1.01208770E-02	1.99687232E+00	1.39516703E-02
2.12000000E+03	1.59252163E+07	-2.23230483E+05	1.02668678E-02	2.27330458E+00	1.36770493E-02
2.20000000E+03	4.15209021E+06	-7.35483566E+04	1.05584641E-02	3.28750299E+00	1.16644544E-02
2.25000000E+03	1.20641590E+06	-4.33885321E+04	1.06738981E-02	3.92591573E+00	1.28433247E-02
2.30000000E+03	4.12883563E-25	-1.29230773E-08	1.07070872E-02	4.54889316E+00	1.07070872E-02

\$AS001

CASE VII 140 SECOND BURN

N=+5, WOSQ=0., DWOS=10., H=0.,

CODEI=1, CODEII=1, P=0.,

ACC=0.,

OUTST=0., 50., 100., 150., 200., 250., 300.,

350., 400., 450., 500., 550., 600., 650., 700.,

750., 800., 850., 900., 948., 962., 1000.,

1050., 1100., 1150., 1155., 1186., 1200., 1250.,

1280., 1300., 1350., 1400., 1450., 1500., 1550.,

1600., 1650., 1680., 1700., 1744., 1750., 1800.,

1850., 1900., 1950., 2000., 2050., 2080., 2100.,

2120., 2200., 2250., 2300.,

RHDAC=2080., 900., 2120., 100.,

\$END

Saturn 1B/Centaur

t = 140
Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.66772290E+01	2.78129968E+02	1.05475389E+03	1.05475389E+03	1.05475389E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-4.89373597E-03	1.53165940E+00	-4.89373597E-03
5.00000000E+01	1.24439059E+05	7.24989107E+03	-4.89310341E-03	1.28662082E+00	-4.91400360E-03
1.00000000E+02	9.04751622E+05	2.47310344E+04	-4.88430781E-03	1.03985918E+00	-4.95624992E-03
1.50000000E+02	2.48419712E+06	3.69901320E+04	-4.85143555E-03	7.91716624E-01	-4.96002422E-03
2.00000000E+02	4.48275522E+06	4.19889460E+04	-4.78217824E-03	5.44814868E-01	-4.90658035E-03
2.50000000E+02	6.64829351E+06	4.47184723E+04	-4.67109622E-03	3.01856509E-01	-4.80482072E-03
3.00000000E+02	8.95231569E+06	4.68254907E+04	-4.51528136E-03	6.50823272E-02	-4.65662470E-03
3.50000000E+02	1.12933160E+07	4.67529046E+04	-4.31281831E-03	-1.62915064E-01	-4.45528361E-03
4.00000000E+02	1.36252635E+07	4.65387568E+04	-4.06361403E-03	-3.79660050E-01	-4.20678731E-03
4.50000000E+02	1.59421002E+07	4.61042116E+04	-3.76790417E-03	-5.82803030E-01	-3.91111454E-03
5.00000000E+02	1.82327508E+07	4.54937083E+04	-3.42610477E-03	-7.69994050E-01	-3.56880104E-03
5.50000000E+02	2.04887941E+07	4.47226603E+04	-3.03882504E-03	-9.38916384E-01	-3.18048852E-03
6.00000000E+02	2.27026313E+07	4.38085519E+04	-2.60683459E-03	-1.08728966E+00	-2.74698699E-03
6.50000000E+02	2.48675891E+07	4.27709016E+04	-2.13104590E-03	-1.21287787E+00	-2.26925754E-03
7.00000000E+02	2.69780198E+07	4.16312195E+04	-1.61249481E-03	-1.31349644E+00	-1.74839312E-03
7.50000000E+02	2.90294002E+07	4.04129576E+04	-1.05231906E-03	-1.38701828E+00	-1.18559731E-03
8.00000000E+02	3.10184272E+07	3.91414561E+04	-4.51734798E-04	-1.43137879E+00	-5.82161126E-04
8.50000000E+02	3.29431103E+07	3.78438850E+04	1.87988738E-04	-1.44457959E+00	6.05620060E-05
9.00000000E+02	3.48028625E+07	3.65491834E+04	8.65556390E-04	-1.42469095E+00	7.41183152E-04
9.48000000E+02	3.65279609E+07	3.53374014E+04	1.55042538E-03	-1.37274015E+00	1.42893807E-03
9.62000000E+02	3.70202734E+07	3.49938534E+04	1.75636268E-03	-1.35129092E+00	1.63569422E-03
1.00000000E+03	3.82848253E+07	3.21546420E+04	1.87464308E-03	-1.28704221E+00	1.74676583E-03
1.05000000E+03	3.98384179E+07	2.94894453E+04	2.06904190E-03	-1.19555691E+00	1.92212698E-03
1.10000000E+03	4.12039550E+07	2.56869123E+04	2.33101873E-03	-1.09372900E+00	2.15977265E-03
1.15000000E+03	4.24645135E+07	2.47528355E+04	2.64559112E-03	-9.77756970E-01	2.48057221E-03
1.15500000E+03	4.25856469E+07	2.37027979E+04	2.67756519E-03	-9.65256674E-01	2.51954654E-03
1.18600000E+03	4.31712329E+07	9.87244051E+03	2.87005800E-03	-8.82990951E-01	2.81669346E-03
1.20000000E+03	4.32265417E+07	-1.87949643E+03	2.94338847E-03	-8.42595904E-01	2.95354791E-03
1.25000000E+03	4.18489094E+07	-5.16816681E+04	3.21918430E-03	-6.80622206E-01	3.51450812E-03
1.28000000E+03	4.00162120E+07	-6.99658813E+04	3.37780984E-03	-5.71177009E-01	3.77761487E-03
1.30000000E+03	3.85601994E+07	-7.55060581E+04	3.45338183E-03	-4.96389263E-01	3.78896431E-03

1.35000000E+03	3.47147905E+07	-7.81003448E+04	3.62957562E-03	-3.02147573E-01	3.97668826E-03
1.40000000E+03	3.07716489E+07	-7.94058730E+04	3.78702111E-03	-9.91285755E-02	4.13993610E-03
1.45000000E+03	2.67965692E+07	-7.93697252E+04	3.92540554E-03	1.11428758E-01	4.27815987E-03
1.50000000E+03	2.28577894E+07	-7.79470882E+04	4.04473848E-03	3.28266966E-01	4.39116999E-03
1.55000000E+03	1.90255933E+07	-7.50985436E+04	4.16755352E-03	5.54431464E-01	4.91853895E-03
1.60000000E+03	1.53575769E+07	-7.23400115E+04	4.34838780E-03	8.04170829E-01	5.07178792E-03
1.65000000E+03	1.17823182E+07	-7.03400517E+04	4.49114226E-03	1.06106853E+00	5.19454278E-03
1.68000000E+03	9.71980719E+06	-6.64453078E+04	4.55898259E-03	1.21747807E+00	5.22343567E-03
1.70000000E+03	8.43913217E+06	-6.12404027E+04	4.59717550E-03	1.32185536E+00	5.20957953E-03
1.74400000E+03	6.14588990E+06	-4.11886036E+04	4.72421098E-03	1.56512569E+00	5.40420509E-03
1.75000000E+03	5.90765153E+06	-3.82625976E+04	4.73867171E-03	1.59744527E+00	5.36954719E-03
1.80000000E+03	4.42854536E+06	-2.42127081E+04	4.84085290E-03	1.86132372E+00	5.23583998E-03
1.85000000E+03	3.31093190E+06	-2.04083815E+04	4.91793064E-03	2.12352507E+00	5.24736376E-03
1.90000000E+03	2.39605477E+06	-1.61032934E+04	4.97464175E-03	2.38560971E+00	5.23188286E-03
1.95000000E+03	1.70892584E+06	-1.12988856E+04	5.01529118E-03	2.64633851E+00	5.19392969E-03
2.00000000E+03	1.17598120E+06	-9.99861105E+03	5.04403190E-03	2.90624988E+00	5.20050468E-03
2.05000000E+03	7.11094249E+05	-8.57657511E+03	5.06278415E-03	3.16619843E+00	5.19565131E-03
2.08000000E+03	4.67362036E+05	-7.66494404E+03	5.06982754E-03	3.32195964E+00	5.18785871E-03
2.10000000E+03	3.63425610E+05	-4.87867758E+03	5.07314222E-03	3.42498809E+00	5.14796856E-03
2.12000000E+03	2.72332752E+05	-4.22739581E+03	5.07567657E-03	3.52787191E+00	5.14025640E-03
2.20000000E+03	6.43211193E+04	-1.17592456E+03	5.08046625E-03	3.93731925E+00	5.09814933E-03
2.25000000E+03	1.82055368E+04	-6.63323920E+02	5.08223313E-03	4.19306796E+00	5.11539932E-03
2.30000000E+03	1.23726461E-27	-5.04364315E-10	5.08273038E-03	4.44852343E+00	5.08273038E-03

Saturn 1B/Centaur

t = 140
Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.66498712E+01	3.20920790E+03	1.05475389E+03	1.05475389E+03	1.05475389E+03	0.

STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.		-1.38754513E-02	2.23120859E+00	-1.38754513E-02
5.00000000E+01	1.91873247E+06	1.07986007E+05		-1.38655162E-02	1.53201533E+00	-1.41768213E-02
1.00000000E+02	1.24283229E+07	3.08219131E+05		-1.37392875E-02	8.10560781E-01	-1.46358910E-02
1.50000000E+02	3.02365334E+07	3.80399104E+05		-1.33185035E-02	8.05768562E-02	-1.44352077E-02
2.00000000E+02	4.89480714E+07	3.61315655E+05		-1.25249208E-02	-6.22250328E-01	-1.35954033E-02
2.50000000E+02	6.55427410E+07	2.84489469E+05		-1.13737977E-02	-1.27049310E+00	-1.22245247E-02
3.00000000E+02	7.46448139E+07	1.02999157E+05		-9.95444008E-03	-1.83176748E+00	-1.02653443E-02
3.50000000E+02	7.86520368E+07	5.95401077E+04		-8.41783236E-03	-2.30355541E+00	-8.59926278E-03
4.00000000E+02	8.09206997E+07	3.52978199E+04		-6.82007097E-03	-2.69163388E+00	-6.92866228E-03
4.50000000E+02	8.19581203E+07	5.67326097E+03		-5.18881312E-03	-2.99514587E+00	-5.20643558E-03
5.00000000E+02	8.14429423E+07	-2.66560078E+04		-3.55210744E-03	-3.21201391E+00	-3.46849779E-03
5.50000000E+02	7.92624728E+07	-6.07884189E+04		-1.94220799E-03	-3.34231278E+00	-1.74965462E-03
6.00000000E+02	7.53489243E+07	-9.58324081E+04		-3.93172788E-04	-3.38790839E+00	-8.65855692E-05
6.50000000E+02	6.96784431E+07	-1.30925433E+05		1.06002615E-03	-3.35252766E+00	1.48310397E-03
7.00000000E+02	6.22691708E+07	-1.65253473E+05		2.38236373E-03	-3.24178162E+00	2.92180669E-03
7.50000000E+02	5.31783300E+07	-1.98070534E+05		3.53957417E-03	-3.06314326E+00	4.19279273E-03
8.00000000E+02	4.24983443E+07	-2.28717698E+05		4.49889541E-03	-2.82588303E+00	5.26102366E-03
8.50000000E+02	3.03520249E+07	-2.56641300E+05		5.22972651E-03	-2.54096559E+00	6.09388097E-03
9.00000000E+02	1.68868796E+07	-2.81409846E+05		5.70417989E-03	-2.22091284E+00	6.66178962E-03
9.40000000E+02	2.87328859E+06	-3.01945116E+05		5.89545471E-03	-1.89351092E+00	6.93351918E-03
9.62000000E+02	-1.39185258E+06	-3.07313601E+05		5.89963780E-03	-1.79623206E+00	6.95933987E-03
1.00000000E+03	-1.40386491E+07	-3.49052073E+05		5.87538807E-03	-1.52550036E+00	7.26354905E-03
1.05000000E+03	-3.21773118E+07	-3.81582161E+05		5.75947053E-03	-1.15343699E+00	7.66049357E-03
1.10000000E+03	-5.23663551E+07	-4.19043894E+05		5.48437885E-03	-7.55236384E-01	8.27800481E-03
1.15000000E+03	-7.34793326E+07	-4.24775571E+05		5.01145423E-03	-3.51425856E-01	7.84329137E-03
1.15500000E+03	-7.56137599E+07	-4.28913957E+05		4.95540549E-03	-3.12278524E-01	7.81483188E-03
1.18600000E+03	-8.92861407E+07	-4.56065026E+05		4.58676536E-03	-7.66819192E-02	7.05198171E-03
1.20000000E+03	-9.57193094E+07	-4.60397994E+05		4.42979963E-03	2.12206208E-02	6.91843743E-03
1.25000000E+03	-1.16177592E+08	-3.18143966E+05		3.74235357E-03	3.42983822E-01	5.56031909E-03
1.28000000E+03	-1.23723405E+08	-1.76585391E+05		3.27665982E-03	4.91460771E-01	4.28571919E-03
1.30000000E+03	-1.26635307E+08	-1.13088670E+05		3.03572708E-03	5.67535706E-01	3.53834339E-03

1.35003000E+03	-1.31124102E+08	-6.45131915E+04	2.41513925E-03	7.23847624E-01	2.70186455E-03
1.40000000E+03	-1.32918330E+08	-5.84803063E+03	1.77924583E-03	8.36717645E-01	1.80523708E-03
1.45000000E+03	-1.31596431E+08	5.95612904E+04	1.14208188E-03	9.03849308E-01	8.77365035E-04
1.50000000E+03	-1.26907493E+08	1.28253022E+05	5.19301310E-04	9.24450245E-01	-5.07121194E-05
1.55000000E+03	-1.18774461E+08	1.96683436E+05	-2.09597662E-04	8.88065350E-01	-2.17643202E-03
1.60000000E+03	-1.07562419E+08	2.38481843E+05	-1.40276296E-03	7.35140657E-01	-3.78758138E-03
1.65000000E+03	-9.52872005E+07	2.53498108E+05	-2.47105804E-03	5.15004703E-01	-5.00603913E-03
1.68000000E+03	-8.74603867E+07	2.70006066E+05	-3.04842075E-03	3.53820701E-01	-5.74848141E-03
1.70000000E+03	-8.19217871E+07	2.83740399E+05	-3.40511208E-03	2.33860500E-01	-6.24251607E-03
1.74400000E+03	-6.91177296E+07	2.88578371E+05	-4.73462975E-03	-1.58429393E-01	-9.49885037E-03
1.75000000E+03	-6.73577968E+07	2.84594763E+05	-4.89844358E-03	-2.15707300E-01	-9.59085517E-03
1.80000000E+03	-5.42025468E+07	2.46666999E+05	-6.11107492E-03	-7.08479239E-01	-1.01350064E-02
1.85000000E+03	-4.23540898E+07	2.25350158E+05	-7.07486549E-03	-1.23139976E+00	-1.07124790E-02
1.90000000E+03	-3.18638568E+07	1.92269595E+05	-7.81428838E-03	-1.77297819E+00	-1.08856877E-02
1.95000000E+03	-2.33266680E+07	1.47231233E+05	-8.36244015E-03	-2.31381292E+00	-1.06902067E-02
2.00000000E+03	-1.63018977E+07	1.33273928E+05	-8.75756274E-03	-2.85290465E+00	-1.08432267E-02
2.05000000E+03	-1.00480694E+07	1.16390637E+05	-9.01965546E-03	-3.39524207E+00	-1.08227637E-02
2.08000000E+03	-6.72674009E+06	1.04856511E+05	-9.11995829E-03	-3.71873736E+00	-1.07346259E-02
2.10000000E+03	-5.26786420E+06	6.87694606E+04	-9.16782601E-03	-3.92405563E+00	-1.02225723E-02
2.12000000E+03	-3.97876890E+06	6.00667734E+04	-9.20469651E-03	-4.12753100E+00	-1.01223069E-02
2.20000000E+03	-9.67283554E+05	1.75192129E+04	-9.27548709E-03	-4.91308830E+00	-9.53893390E-03
2.25000000E+03	-2.75963142E+05	1.00148587E+04	-9.30215419E-03	-5.40274760E+00	-9.80289713E-03
2.30000000E+03	1.10736749E-23	-2.06503820E-04	-9.30970847E-03	-5.88824160E+00	-9.30970843E-03

Saturn 1B/Centaur

t = 140

Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.44727276E+01	5.54618716E+03	1.05475389E+03	1.05475389E+03	1.05475389E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.03353362E-02	1.57312824E+00	-1.03353362E-02
5.00000000E+01	2.31262660E+06	1.29513908E+05	-1.03233313E-02	1.04982848E+00	-1.06966977E-02
1.00000000E+02	1.47052842E+07	3.57974091E+05	-1.01728545E-02	5.00474493E-01	-1.12141943E-02
1.50000000E+02	3.49230439E+07	4.21797735E+05	-9.68168897E-03	-5.66709111E-02	-1.09199234E-02
2.00000000E+02	5.51281298E+07	3.80056650E+05	-8.77750743E-03	-5.79418683E-01	-9.90351450E-03
2.50000000E+02	7.19193440E+07	2.67200839E+05	-7.49787059E-03	-1.03767749E+00	-8.29689828E-03
3.00000000E+02	7.82306013E+07	1.91190718E+04	-5.97253190E-03	-1.39387464E+00	-6.03024306E-03
3.50000000E+02	7.77127114E+07	-3.64200361E+04	-4.40845231E-03	-1.65177765E+00	-4.29747330E-03
4.00000000E+02	7.50278679E+07	-6.57747979E+04	-2.87858882E-03	-1.82550432E+00	-2.67623719E-03
4.50000000E+02	7.09024059E+07	-9.95257406E+04	-1.41647204E-03	-1.91977997E+00	-1.10732202E-03
5.00000000E+02	6.50586525E+07	-1.34278142E+05	-5.39640546E-05	-1.93780895E+00	3.67214858E-04
5.50000000E+02	5.74799919E+07	-1.68710735E+05	1.17429301E-03	-1.88527630E+00	1.70870107E-03
6.00000000E+02	4.82130299E+07	-2.01621698E+05	2.23396689E-03	-1.76979314E+00	2.87899539E-03
6.50000000E+02	3.73607630E+07	-2.31962793E+05	3.09223412E-03	-1.60083657E+00	3.84180821E-03
7.00000000E+02	2.50740778E+07	-2.58871894E+05	3.71882560E-03	-1.38962719E+00	4.56387061E-03
7.50000000E+02	1.15416870E+07	-2.81702764E+05	4.08688621E-03	-1.14895261E+00	5.01591624E-03
8.00000000E+02	-3.02133707E+06	-3.00051292E+05	4.17361887E-03	-8.92947338E-01	5.17344340E-03
8.50000000E+02	-1.83862367E+07	-3.13777454E+05	3.96068679E-03	-6.36840586E-01	5.01722831E-03
9.00000000E+02	-3.43242248E+07	-3.23022561E+05	3.43435211E-03	-3.96685211E-01	4.53356578E-03
9.48000000E+02	-4.99645744E+07	-3.28083050E+05	2.62556767E-03	-1.96549595E-01	3.75349238E-03
9.62000000E+02	-5.45640508E+07	-3.28942632E+05	2.33289314E-03	-1.45973877E-01	3.46717808E-03
1.00000000E+03	-6.71674015E+07	-3.32932382E+05	2.14138266E-03	-1.41099574E-02	3.46543652E-03
1.05000000E+03	-8.37641671E+07	-3.29085829E+05	1.76455614E-03	1.57945160E-01	3.40404510E-03
1.10000000E+03	-9.98219893E+07	-3.13908000E+05	1.16882023E-03	3.24544168E-01	3.26154024E-03
1.15000000E+03	-1.15348783E+08	-3.06737817E+05	3.59682616E-04	4.66755176E-01	2.40460140E-03
1.15500000E+03	-1.16857111E+08	-2.96551269E+05	2.72383977E-04	4.78391330E-01	2.24939244E-03
1.18600000E+03	-1.24430485E+08	-1.40743955E+05	-2.70076975E-04	5.27441466E-01	4.90701157E-04
1.20000000E+03	-1.25396102E+08	2.79539005E+03	-4.82334614E-04	5.27396035E-01	-4.97444830E-04
1.25000000E+03	-1.09070748E+08	6.23282651E+05	-1.25571693E-03	3.90215039E-01	-4.81733208E-03
1.28000000E+03	-8.74223584E+07	8.03725456E+05	-1.63776830E-03	2.22898325E-01	-6.23048519E-03
1.30000000E+03	-7.09598126E+07	8.38829162E+05	-1.79017088E-03	1.15399409E-01	-5.51830048E-03

1.35000000E+03	-2.85471688E+07	6.35570638E+05	-2.03026691E-03	-1.67676459E-01	-5.74391419E-03
1.40000000E+03	1.19801615E+07	7.95370229E+05	-2.07024738E-03	-4.52908984E-01	-5.60522618E-03
1.45000000E+03	4.99876378E+07	7.19117316E+05	-1.91975796E-03	-7.22342935E-01	-5.11583492E-03
1.50000000E+03	8.33422460E+07	6.09958757E+05	-1.59706539E-03	-9.59174761E-01	-4.30799319E-03
1.55000000E+03	1.10519502E+08	4.72742592E+05	-1.00466208E-03	-1.17512169E+00	-5.73208800E-03
1.60000000E+03	1.30663195E+08	3.64343202E+05	2.09383004E-04	-1.39600388E+00	-3.37354902E-03
1.65000000E+03	1.47560588E+08	3.02417132E+05	1.73703683E-03	-1.51534643E+00	-1.28713450E-03
1.68000000E+03	1.55341601E+08	1.99468377E+05	2.69519488E-03	-1.52679544E+00	<u>7.00511110E-04</u>
1.70000000E+03	1.58166535E+08	7.61043465E+04	3.35607691E-03	-1.49455136E+00	2.59503344E-03
1.74400000E+03	1.53427392E+08	-3.02815418E+05	5.12310062E-03	-1.20731765E+00	1.11223646E-02
1.75000000E+03	1.51477148E+08	-3.46120175E+05	6.48903798E-03	-1.13730295E+00	1.21958834E-02
1.80000000E+03	1.29215264E+08	-4.90725554E+05	9.30747643E-03	-3.75517387E-01	1.73127873E-02
1.85000000E+03	1.04606244E+08	-4.87759535E+05	1.16454485E-02	5.49699143E-01	1.95188873E-02
1.90000000E+03	8.10570067E+07	-4.47804166E+05	1.34987534E-02	1.55844910E+00	2.06521745E-02
1.95000000E+03	6.04795224E+07	-3.68098063E+05	1.49075264E-02	2.59739000E+00	2.07367448E-02
2.00000000E+03	4.27324206E+07	-3.39548270E+05	1.59372169E-02	3.64916820E+00	2.12509629E-02
2.05000000E+03	2.66898990E+07	-3.00493856E+05	1.66281855E-02	4.71445467E+00	2.12833963E-02
2.08000000E+03	1.80892167E+07	-2.72291057E+05	1.68060141E-02	5.35042194E+00	2.10889777E-02
2.10000000E+03	1.42317145E+07	-1.82366936E+05	1.70250200E-02	5.74896824E+00	<u>1.98220589E-02</u>
2.12000000E+03	1.08040669E+07	-1.60152561E+05	1.71248670E-02	6.14298177E+00	1.95714283E-02
2.20000000E+03	2.67468618E+06	-4.81628239E+04	1.73185124E-02	7.64583403E+00	1.80427654E-02
2.25000000E+03	7.66792393E+05	-2.77600564E+04	1.73924148E-02	8.58322958E+00	1.87804176E-02
2.30000000E+03	-1.62657647E-25	-1.15248763E-07	1.74134335E-02	9.50952349E+00	1.74134335E-02

Saturn 1B/Centaur

t = 140
Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.10880080E+02	1.22943922E+04	1.05475389E+03	1.05475389E+03	1.05475389E+03	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.18757661E-02	1.71431406E+00	-1.18757661E-02
5.00000000E+01	5.51975604E+06	3.07244461E+05	-1.18470268E-02	1.10493453E+00	-1.27327600E-02
1.00000000E+02	3.42096972E+07	8.09200823E+05	-1.14931429E-02	4.35887776E-01	-1.38470927E-02
1.50000000E+02	7.81635638E+07	8.78397199E+05	-1.03746179E-02	-2.42940006E-01	-1.29532512E-02
2.00000000E+02	1.18185705E+08	7.14378839E+05	-8.39700972E-03	-8.33564973E-01	-1.05135248E-02
2.50000000E+02	1.47339582E+08	3.89167690E+05	-5.71527072E-03	-1.27557872E+00	-6.87902365E-03
3.00000000E+02	1.48428781E+08	-2.49083682E+05	-2.69652932E-03	-1.48910350E+00	-1.94466706E-03
3.50000000E+02	1.32648109E+08	-3.71453253E+05	1.24452277E-04	-1.50421249E+00	1.25634340E-03
4.00000000E+02	1.12417289E+08	-4.26494236E+05	2.57968121E-03	-1.37297095E+00	3.89176133E-03
4.50000000E+02	8.98002804E+07	-4.76515562E+05	4.60602979E-03	-1.12152107E+00	6.08619760E-03
5.00000000E+02	6.49668455E+07	-5.14506001E+05	6.15687028E-03	-7.72859101E-01	7.77067783E-03
5.50000000E+02	3.86066020E+07	-5.37120523E+05	7.19449149E-03	-3.53785573E-01	8.89587425E-03
6.00000000E+02	1.15489974E+07	-5.42124392E+05	7.69646543E-03	1.06878561E-01	9.43083080E-03
6.50000000E+02	-1.52938999E+07	-5.28454358E+05	7.65787694E-03	5.79280273E-01	9.36554605E-03
7.00000000E+02	-4.09866472E+07	-4.96238348E+05	7.09238529E-03	1.03362017E+00	8.71227430E-03
7.50000000E+02	-6.46295622E+07	-4.46771078E+05	6.03209827E-03	1.44127036E+00	7.50550855E-03
8.00000000E+02	-8.54155314E+07	-3.82445606E+05	4.52628321E-03	1.77585872E+00	5.80066032E-03
8.50000000E+02	-1.02682344E+08	-3.06643453E+05	2.63898307E-03	2.01425582E+00	3.67150320E-03
9.00000000E+02	-1.15958598E+08	-2.23588354E+05	4.45647180E-04	2.13740552E+00	1.20649612E-03
9.48000000E+02	-1.24721790E+08	-1.41566874E+05	-1.87118808E-03	2.13382722E+00	-1.38449187E-03
9.62000000E+02	-1.26537789E+08	-1.17207834E+05	-2.57486941E-03	2.10896906E+00	-2.16829067E-03
1.00000000E+03	-1.26515556E+08	7.81000864E+04	-2.97418820E-03	2.00328004E+00	-3.28478797E-03
1.05000000E+03	-1.18918566E+08	2.58813787E+05	-3.58732742E-03	1.80516241E+00	-4.87672463E-03
1.10000000E+03	-9.88756591E+07	5.04228784E+05	-4.29444625E-03	1.49149204E+00	-7.65597148E-03
1.15000000E+03	-7.23111775E+07	5.55636683E+05	-4.93961706E-03	1.08271136E+00	-8.64386161E-03
1.15500000E+03	-6.94054153E+07	6.06316286E+05	-4.99290985E-03	1.03850739E+00	-9.03501842E-03
1.18600000E+03	-4.42165199E+07	1.16580541E+06	-5.25585795E-03	7.19423019E-01	-1.15575088E-02
1.20000000E+03	-2.51028516E+07	1.54698257E+06	-5.31542529E-03	5.42069271E-01	-1.36774933E-02
1.25000000E+03	7.19953446E+07	1.95101248E+06	-5.17524937E-03	-2.77702238E-01	-1.63238921E-02
1.28000000E+03	1.22133140E+08	1.29796613E+06	-4.79318917E-03	-7.14213451E-01	-1.22101385E-02
1.30000000E+03	1.44506691E+08	9.24717663E+05	-4.53561196E-03	-9.07010620E-01	-8.64546824E-03

1.35000000E+03	1.83269454E+08	6.07619539E+05	-3.74132814E-03	-1.28699089E+00	-6.44185942E-03
1.40000000E+03	2.03736137E+08	1.98854214E+05	-2.80282768E-03	-1.54196866E+00	-3.68662419E-03
1.45000000E+03	2.02277397E+08	-2.62414135E+05	-1.81758243E-03	-1.65096673E+00	-6.51297387E-04
1.50000000E+03	1.77338838E+08	-7.33043128E+05	-8.95604933E-04	-1.60745858E+00	2.36236453E-03
1.55000000E+03	1.29539489E+08	-1.16841217E+06	5.52626282E-06	-1.35670307E+00	1.16896480E-02
1.60000000E+03	6.378e4777E+07	-1.38368475E+06	1.03272361E-03	-6.70313559E-01	1.48695712E-02
1.65000000E+03	-6.18311937E+06	-1.40654641E+06	1.33698368E-03	9.16954949E-02	1.54024478E-02
1.68000000E+03	-4.78638770E+07	-1.35305266E+06	1.16551255E-03	5.46698591E-01	1.46960391E-02
1.70000000E+03	-7.38217903E+07	-1.22691797E+06	9.08458711E-04	8.27198539E-01	1.31776384E-02
1.74400000E+03	-1.13683047E+08	-4.72204214E+05	-7.91117865E-04	1.49402881E+00	7.00463288E-03
1.75000000E+03	-1.16140398E+08	-3.48479630E+05	-1.06705438E-03	1.52900156E+00	4.67869385E-03
1.80000000E+03	-1.15802421E+08	2.13500175E+05	-3.43329963E-03	1.41128255E+00	-6.91617361E-03
1.85000000E+03	-1.02428473E+08	3.15196154E+05	-5.62409954E-03	9.66780198E-01	-1.07120116E-02
1.90000000E+03	-8.50326247E+07	3.72060656E+05	-7.50346066E-03	3.57836852E-01	-1.34469216E-02
1.95000000E+03	-6.61638742E+07	3.72627503E+05	-9.01547859E-03	-3.56575397E-01	-1.49068225E-02
2.00000000E+03	-4.78478615E+07	3.57358649E+05	-1.01543244E-02	-1.12546124E+00	-1.57467915E-02
2.05000000E+03	-3.06991818E+07	3.25841545E+05	-1.09371686E-02	-1.92121087E+00	-1.59850624E-02
2.08000000E+03	-2.13116647E+07	2.99003340E+05	-1.12484285E-02	-2.39927523E+00	-1.58527300E-02
2.10000000E+03	-1.69136714E+07	2.09134884E+05	-1.14010473E-02	-2.69341948E+00	-1.46086375E-02
2.12000000E+03	-1.29620560E+07	1.85626906E+05	-1.15202368E-02	-2.98317441E+00	-1.43559671E-02
2.20000000E+03	-5.31513390E+06	5.90814901E+04	-1.17556874E-02	-4.06267851E+00	-1.26441308E-02
2.25000000E+03	-9.58507470E+05	3.45553716E+04	-1.18476437E-02	-4.73881503E+00	-1.35754123E-02
2.30000000E+03	-2.26887577E-23	4.78374294E-04	-1.18739784E-02	-5.40209941E+00	-1.18739785E-02

TRW SYSTEMS

Saturn 1B/Centaur

t = 140
Mode 5

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.41880544E+02	2.01300887E+04	1.05475389E+03	1.05475389E+03	1.05475389E+03	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.25422466E-02	1.76553961E+00	-1.25422466E-02
5.00000000E+01	9.24433060E+06	5.12486539E+05	-1.24940227E-02	1.11231716E+00	-1.39714337E-02
1.00000000E+02	5.61932780E+07	1.29757605E+06	-1.19077284E-02	3.62286492E-01	-1.56823524E-02
1.50000000E+02	1.24200827E+08	1.30313342E+06	-1.01031772E-02	-3.92423440E-01	-1.39286711E-02
2.00000000E+02	1.80589517E+08	9.49996838E+05	-7.02496507E-03	-9.91581216E-01	-9.83955379E-03
2.50000000E+02	2.15912726E+08	3.59365327E+05	-3.01154944E-03	-1.35054635E+00	-4.08618246E-03
3.00000000E+02	2.03382095E+08	-6.86364294E+05	1.28096822E-03	-1.35489459E+00	3.35276756E-03
3.50000000E+02	1.64411462E+08	-8.51766018E+05	4.97265722E-03	-1.07708956E+00	7.56815582E-03
4.00000000E+02	1.20058354E+08	-9.07501674E+05	7.82191294E-03	-6.17719073E-01	1.06137793E-02
4.50000000E+02	7.39808598E+07	-9.29224997E+05	9.76412186E-03	-3.17850587E-02	1.26505101E-02
5.00000000E+02	2.78203212E+07	-9.10001825E+05	1.07805346E-02	6.29762239E-01	1.36348605E-02
5.50000000E+02	-1.62813671E+07	-8.46622307E+05	1.08906419E-02	1.31422197E+00	1.35724024E-02
6.00000000E+02	-5.61071893E+07	-7.39273787E+05	1.01578066E-02	1.97051955E+00	1.25228927E-02
6.50000000E+02	-8.95307398E+07	-5.91346108E+05	8.68909312E-03	2.55192506E+00	1.05999932E-02
7.00000000E+02	-1.14667823E+08	-4.09062246E+05	6.63190791E-03	3.01866243E+00	7.96722478E-03
7.50000000E+02	-1.30005469E+08	-2.00947363E+05	4.16782120E-03	3.34022952E+00	4.83052728E-03
8.00000000E+02	-1.34500837E+08	2.28396382E+04	1.50409755E-03	3.49727266E+00	1.42799179E-03
8.50000000E+02	-1.27643945E+08	2.51278776E+05	-1.13639846E-03	3.48289235E+00	-1.98249640E-03
9.00000000E+02	-1.09479978E+08	4.73325842E+05	-3.52615221E-03	3.30329665E+00	-5.13683301E-03
9.48000000E+02	-8.19388241E+07	6.70984653E+05	-5.37895948E-03	2.99322976E+00	-7.68575398E-03
9.62000000E+02	-7.21672780E+07	7.24609875E+05	-5.81080683E-03	2.88119256E+00	-8.30946157E-03
1.00000000E+03	-3.47860007E+07	1.14995609E+06	-5.98184896E-03	2.51775436E+00	-1.05551614E-02
1.05000000E+03	2.98778767E+07	1.49049771E+06	-5.99507081E-03	1.92833676E+00	-1.34206551E-02
1.10000000E+03	1.15883847E+08	1.87484408E+06	-5.52183213E-03	1.14073010E+00	-1.80207927E-02
1.15000000E+03	2.10999607E+08	1.92019085E+06	-4.29436624E-03	2.58239128E-01	-1.70956385E-02
1.15500000E+03	2.20645493E+08	1.93705090E+06	-4.13209893E-03	1.72864035E-01	-1.70457716E-02
1.18600000E+03	2.79956833E+08	1.75780010E+06	-3.01157667E-03	3.19616701E-01	-1.25131988E-02
1.20000000E+03	3.01975471E+08	1.36200634E+06	-2.51703618E-03	-4.77379813E-01	-9.87923263E-03
1.25000000E+03	3.01740560E+08	-1.43869078E+06	-4.91330265E-04	-5.51247626E-01	7.72975992E-03
1.28000000E+03	2.44146157E+08	-2.28442958E+06	5.73334688E-04	-2.20349193E-01	1.36272180E-02
1.30000000E+03	1.97354906E+08	-2.36683997E+06	9.98112631E-04	3.47555502E-03	1.15174014E-02

SYSTEMS

1.35000000E+03	8.13354242E+07	-2.22812474E+06	1.66526152E-03	5.88029625E-01	1.15680382E-02
1.40000000E+03	-2.09655970E+07	-1.82132900E+06	1.80222123E-03	1.13144036E+00	9.89701678E-03
1.45000000E+03	-9.69539218E+07	-1.18513778E+06	1.50599719E-03	1.55339629E+00	6.77327622E-03
1.50000000E+03	-1.36848579E+08	-3.91925411E+05	9.28057451E-04	1.79235768E+00	2.66994816E-03
1.55000000E+03	-1.35111940E+08	4.62284875E+05	1.00300888E-04	1.79247333E+00	-4.52254786E-03
1.60000000E+03	-9.47261882E+07	9.83272440E+05	-1.13323135E-03	1.36097687E+00	-1.09659557E-02
1.65000000E+03	-4.17378897E+07	1.14060222E+06	-1.85847875E-03	7.53977576E-01	-1.32645010E-02
1.68000000E+03	-5.70291175E+06	1.26637857E+06	-2.01035078E-03	3.35025416E-01	-1.46741365E-02
1.70000000E+03	2.02632256E+07	1.31878564E+06	-1.98007985E-03	3.52780883E-02	-1.51679363E-02
1.74400000E+03	7.14635599E+07	8.29570564E+05	-1.14108649E-03	-8.86315801E-01	-1.48366977E-02
1.75000000E+03	7.60674656E+07	7.05281941E+05	-9.63900183E-04	-9.68595869E-01	-1.25926214E-02
1.80000000E+03	9.08666957E+07	3.57826222E+04	7.62260257E-04	-1.21802696E+00	1.78530694E-04
1.85000000E+03	8.85232410E+07	-1.26717425E+05	2.56973317E-03	-1.09661890E+00	4.61521219E-03
1.90000000E+03	7.87225804E+07	-2.57723194E+05	4.25313491E-03	-7.67941086E-01	8.37011884E-03
1.95000000E+03	6.37081120E+07	-3.31588934E+05	5.68361458E-03	-2.79707092E-01	1.09261274E-02
2.00000000E+03	4.70503613E+07	-3.31468700E+05	6.79119102E-03	2.95571885E-01	1.19784946E-02
2.05000000E+03	3.08987394E+07	-3.11137180E+05	7.56898831E-03	9.07423879E-01	1.23890840E-02
2.08000000E+03	2.18792755E+07	-2.88901724E+05	7.88498928E-03	1.27881715E+00	1.23337377E-02
2.10000000E+03	1.74851209E+07	-2.09996051E+05	8.04219394E-03	1.50567918E+00	1.12629923E-02
2.12000000E+03	1.34994960E+07	-1.88062482E+05	8.16584000E-03	1.72882248E+00	1.10387774E-02
2.20000000E+03	3.53882491E+06	-6.25781392E+04	8.41358259E-03	2.54529024E+00	9.35460724E-03
2.25000000E+03	1.02964074E+06	-3.70060443E+04	8.51202947E-03	3.06009932E+00	1.03623317E-02
2.30000000E+03	-5.84168053E-24	-2.15946007E-05	8.54036568E-03	3.56191086E+00	8.54036568E-03

\$AS001

CASE VIII 154 SECOND /BURNOUT

N=+5, WOSQ=0., DWOS=10., H=0.,

CODEI=1, CODEII=1, P=0.,

ACC=0.,

OUTST=0., 50., 100., 150., 200., 250., 300.,

350., 400., 450., 500., 550., 600., 650., 700.,

750., 800., 850., 900., 948., 962., 1000.,

1050., 1100., 1150., 1155., 1186., 1200., 1250.,

1280., 1300., 1350., 1400., 1450., 1500., 1550.,

1600., 1650., 1680., 1700., 1744., 1750., 1800.,

1850., 1900., 1950., 2000., 2050., 2080., 2100.,

2120., 2200., 2250., 2300.,

RHOAC=2080., 900., 2120., 100.,

\$END

TRW SYSTEMS

Saturn 1B/Centaur

t = 154
Mode 1

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.68309922E+01	2.83282297E+02	9.96308290E+02	9.96308290E+02	9.96308290E+02	0.
STATION IN.	M/Q LB. IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-4.92661139E-03	1.63952042E+00	-4.92661139E-03
5.00000000E+01	1.36370534E+05	7.96025346E+03	-4.92591890E-03	1.39280433E+00	-4.94886694E-03
1.00000000E+02	9.95489263E+05	2.69904516E+04	-4.91624580E-03	1.14418883E+00	-4.99476051E-03
1.50000000E+02	2.63119341E+06	3.71778567E+04	-4.88079061E-03	8.94345203E-01	-4.98993037E-03
2.00000000E+02	4.63811222E+06	4.22208633E+04	-4.80851429E-03	6.46025835E-01	-4.93360351E-03
2.50000000E+02	6.80608737E+06	4.43338390E+04	-4.69424835E-03	4.01822817E-01	-4.82682265E-03
3.00000000E+02	9.04172838E+06	4.49700149E+04	-4.53582267E-03	1.64167880E-01	-4.67156524E-03
3.50000000E+02	1.12939254E+07	4.50558738E+04	-4.33247278E-03	-6.45577018E-02	-4.46976689E-03
4.00000000E+02	1.35439865E+07	4.49412345E+04	-4.08408363E-03	-2.82048267E-01	-4.22234224E-03
4.50000000E+02	1.57829925E+07	4.45878112E+04	-3.79078437E-03	-4.86027919E-01	-3.92928445E-03
5.00000000E+02	1.79997655E+07	4.40543311E+04	-3.45291232E-03	-6.74224387E-01	-3.59109382E-03
5.50000000E+02	2.01856819E+07	4.33563042E+04	-3.07099966E-03	-8.44394397E-01	-3.20833507E-03
6.00000000E+02	2.23329448E+07	4.25112841E+04	-2.64574295E-03	-9.94327282E-01	-2.78174513E-03
6.50000000E+02	2.44346853E+07	4.15388345E+04	-2.17798559E-03	-1.12185317E+00	-2.31221588E-03
7.00000000E+02	2.64850622E+07	4.04604878E+04	-1.66869823E-03	-1.22485027E+00	-1.80077488E-03
7.50000000E+02	2.84793590E+07	3.92996985E+04	-1.11895726E-03	-1.30125111E+00	-1.24856408E-03
8.00000000E+02	3.04140790E+07	3.80817910E+04	-5.29921354E-04	-1.34904770E+00	-6.56816688E-04
8.50000000E+02	3.22870374E+07	3.68339026E+04	9.71938304E-05	-1.36629547E+00	-2.68321209E-05
9.00000000E+02	3.40974501E+07	3.55849245E+04	7.61142819E-04	-1.35111593E+00	6.40050858E-04
9.48000000E+02	3.57772417E+07	3.44132544E+04	1.43202987E-03	-1.30435411E+00	1.31371970E-03
9.62000000E+02	3.62566935E+07	3.40806983E+04	1.63372706E-03	-1.28454774E+00	1.51620741E-03
1.00000000E+03	3.74860950E+07	3.12014607E+04	1.74955459E-03	-1.22487413E+00	1.62546809E-03
1.05000000E+03	3.89936565E+07	2.86156874E+04	1.93986206E-03	-1.13953656E+00	1.79730015E-03
1.10000000E+03	4.03186352E+07	2.49217855E+04	2.19624363E-03	-1.04406743E+00	2.03009839E-03
1.15000000E+03	4.15415854E+07	2.40129360E+04	2.50401729E-03	-9.34752217E-01	2.34393105E-03
1.15500000E+03	4.16590884E+07	2.29904109E+04	2.53529606E-03	-9.22937324E-01	2.38202666E-03
1.18600000E+03	4.22264300E+07	9.51355994E+03	2.72358816E-03	-8.45030480E-01	2.67216351E-03
1.20000000E+03	4.22787986E+07	-1.94368479E+03	2.79531225E-03	-8.06681355E-01	2.80581865E-03
1.25000000E+03	4.09293713E+07	-5.05365467E+04	3.06505161E-03	-6.52424815E-01	3.35383187E-03
1.28000000E+03	3.91376472E+07	-6.83939130E+04	3.22019282E-03	-5.47890394E-01	3.61101518E-03
1.30000000E+03	3.77143684E+07	-7.38081020E+04	3.29410633E-03	-4.76417160E-01	3.62214234E-03

C154
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TRW SYSTEMS

1.35000000E+03	3.39553943E+07	-7.63463118E+04	3.46644028E-03	-2.90621628E-01	3.80575722E-03
1.40000000E+03	3.01006785E+07	-7.76283235E+04	3.62044692E-03	-9.62401439E-02	3.96546169E-03
1.45000000E+03	2.62143822E+07	-7.76014096E+04	3.75581913E-03	1.05516803E-01	4.10071428E-03
1.50000000E+03	2.23631021E+07	-7.62209078E+04	3.87256428E-03	3.13420355E-01	4.21132387E-03
1.55000000E+03	1.86154740E+07	-7.34475247E+04	3.99272727E-03	5.30449624E-01	4.72720251E-03
1.60000000E+03	1.50278321E+07	-7.07577134E+04	4.16967076E-03	7.70543141E-01	4.87724789E-03
1.65000000E+03	1.15307002E+07	-6.88047680E+04	4.30936746E-03	1.01764385E+00	4.99741514E-03
1.68000000E+03	9.51315135E+06	-6.49992739E+04	4.37576201E-03	1.16812812E+00	5.02575475E-03
1.70000000E+03	8.26030315E+06	-5.99122164E+04	4.41314420E-03	1.26855443E+00	5.01226636E-03
1.74400000E+03	6.01654400E+06	-4.03060833E+04	4.53749691E-03	1.50284409E+00	5.20292126E-03
1.75000000E+03	5.78340521E+06	-3.74443904E+04	4.55165342E-03	1.53395833E+00	5.16903826E-03
1.80000000E+03	4.33572307E+06	-2.37010968E+04	4.65168966E-03	1.78791406E+00	5.03833072E-03
1.85000000E+03	3.24168406E+06	-1.99786724E+04	4.72715353E-03	2.04023233E+00	5.04965026E-03
1.90000000E+03	2.34603764E+06	-1.57654310E+04	4.78267964E-03	2.29243801E+00	5.03452359E-03
1.95000000E+03	1.67329860E+06	-1.10628078E+04	4.82248112E-03	2.54331755E+00	4.99738717E-03
2.00000000E+03	1.15148296E+06	-9.78993457E+03	4.85062286E-03	2.79339744E+00	5.00382997E-03
2.05000000E+03	6.96294078E+05	-8.39773483E+03	4.86898461E-03	3.04351395E+00	4.99908120E-03
2.08000000E+03	4.57643209E+05	-7.50517409E+03	4.87588146E-03	3.19338033E+00	4.99145236E-03
2.10000000E+03	3.55870654E+05	-4.77712779E+03	4.87912722E-03	3.29249589E+00	4.95239605E-03
2.12000000E+03	2.66673548E+05	-4.13943526E+03	4.88160890E-03	3.39146984E+00	4.94484500E-03
2.20000000E+03	6.29863223E+04	-1.15151074E+03	4.88629910E-03	3.78532122E+00	4.90361505E-03
2.25000000E+03	1.78278784E+04	-6.49561206E+02	4.88802932E-03	4.03132577E+00	4.92050738E-03
2.30000000E+03	1.32439404E-27	2.26311847E-10	4.88851625E-03	4.27704318E+00	4.88851625E-03

TRW SYSTEMS

Saturn 1B/Centaur

t = 154
Mode 2

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
5.91532489E+01	3.49910626E+03	9.96308290E+02	9.96308290E+02	9.96308290E+02	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.19779536E-02	1.74383783E+00	-1.19779536E-02
5.00000000E+01	1.60353022E+06	8.94954586E+04	-1.19696145E-02	1.14041061E+00	-1.22276146E-02
1.00000000E+02	1.00763395E+07	2.40928564E+05	-1.18659823E-02	5.19258023E-01	-1.25668389E-02
1.50000000E+02	2.32239702E+07	2.69196027E+05	-1.15351270E-02	-1.05293812E-01	-1.23253820E-02
2.00000000E+02	3.60461076E+07	2.39744801E+05	-1.09398645E-02	-7.06048849E-01	-1.16501648E-02
2.50000000E+02	4.69158485E+07	1.90394836E+05	-1.01061298E-02	-1.26545413E+00	-1.06754796E-02
3.00000000E+02	5.54094599E+07	1.49354510E+05	-9.07944152E-03	-1.77131450E+00	-9.53027001E-03
3.50000000E+02	6.19376796E+07	1.13446654E+05	-7.90296468E-03	-2.21621266E+00	-8.24865895E-03
4.00000000E+02	6.69940387E+07	9.18747894E+04	-6.61183907E-03	-2.59498188E+00	-6.89448553E-03
4.50000000E+02	7.08218215E+07	6.06543313E+04	-5.23107788E-03	-2.90320285E+00	-5.41948430E-03
5.00000000E+02	7.30083294E+07	2.63667845E+04	-3.78991815E-03	-3.13573066E+00	-3.87262062E-03
5.50000000E+02	7.34219476E+07	-1.01131849E+04	-2.32257445E-03	-3.28987657E+00	-2.29053993E-03
6.00000000E+02	7.19753800E+07	-4.78910689E+04	-8.65452081E-04	-3.36484682E+00	-7.12238884E-04
6.50000000E+02	6.86260950E+07	-8.60745667E+04	5.43745532E-04	-3.36183639E+00	8.21890420E-04
7.00000000E+02	6.33756455E+07	-1.23796425E+05	1.86690728E-03	-3.28407472E+00	2.27102048E-03
7.50000000E+02	5.62678402E+07	-1.60237522E+05	3.06637967E-03	-3.13682386E+00	3.59482840E-03
8.00000000E+02	4.73857637E+07	-1.94649676E+05	4.10578406E-03	-2.92733061E+00	4.75439157E-03
8.50000000E+02	3.68476758E+07	-2.26377653E+05	4.95076300E-03	-2.66473546E+00	5.71301467E-03
9.00000000E+02	2.48018385E+07	-2.54879924E+05	5.56963375E-03	-2.35994248E+00	6.43696479E-03
9.50000000E+02	1.19789213E+07	-2.78826584E+05	5.92456833E-03	-2.03923442E+00	6.88315304E-03
1.00000000E+03	8.03077484E+06	-2.85143084E+05	5.98063675E-03	-1.94227827E+00	6.96388876E-03
1.05000000E+03	-3.99569486E+06	-3.36874645E+05	5.98707738E-03	-1.67018185E+00	7.32680939E-03
1.10000000E+03	-2.16654122E+07	-3.76208776E+05	5.92244082E-03	-1.29336476E+00	7.79669393E-03
1.15000000E+03	-4.18477442E+07	-4.22710032E+05	5.71551144E-03	-8.85366114E-01	8.53357832E-03
1.20000000E+03	-6.31941002E+07	-4.30352889E+05	5.32085664E-03	-4.66479034E-01	8.18987590E-03
1.25000000E+03	-6.53612581E+07	-4.36417535E+05	5.27252946E-03	-4.25547170E-01	8.18197970E-03
1.30000000E+03	-7.95175426E+07	-4.86001782E+05	4.94908766E-03	-1.76362505E-01	7.57612432E-03
1.35000000E+03	-8.64906385E+07	-5.07131383E+05	4.80827403E-03	-7.03547993E-02	7.54952475E-03
1.40000000E+03	-1.10666625E+08	-4.11181534E+05	4.16964026E-03	2.92897464E-01	6.51924903E-03
1.45000000E+03	-1.21045333E+08	-2.69866319E+05	3.71979848E-03	4.70646138E-01	5.26189173E-03
1.50000000E+03	-1.25786585E+08	-2.02235843E+05	3.48224366E-03	5.63753916E-01	4.38106963E-03

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1.35000000E+03	-1.34606675E+08	-1.47877010E+05	2.85520850E-03	7.61567499E-01	3.51243966E-03
1.40000000E+03	-1.40335805E+08	-7.92236799E+04	2.19291281E-03	9.13348249E-01	2.54501805E-03
1.45000000E+03	-1.42356223E+08	-2.10665787E+02	1.51178080E-03	1.01498580E+00	1.51271710E-03
1.50000000E+03	-1.40254113E+08	8.49638030E+04	8.30721727E-04	1.06416358E+00	4.53104825E-04
1.55000000E+03	-1.33829245E+08	1.71913872E+05	1.61094007E-05	1.05065725E+00	-1.70302931E-03
1.60000000E+03	-1.23435472E+08	2.26655172E+05	-1.34043330E-03	9.13150996E-01	-3.60698502E-03
1.65000000E+03	-1.11614778E+08	2.47830518E+05	-2.57847621E-03	6.96453125E-01	-5.05678139E-03
1.68000000E+03	-1.03841641E+08	2.73463712E+05	-3.25927456E-03	5.31032607E-01	-5.99391169E-03
1.70000000E+03	-9.81366403E+07	2.97391152E+05	-3.68466088E-03	4.04503167E-01	-6.65857240E-03
1.74400000E+03	-8.41319766E+07	3.29241631E+05	-5.29078019E-03	-2.61490549E-02	-1.07263219E-02
1.75000000E+03	-8.21598884E+07	3.27891925E+05	-5.49032879E-03	-9.10315699E-02	-1.08966260E-02
1.80000000E+03	-6.65465926E+07	2.96738292E+05	-6.97453247E-03	-6.60041810E-01	-1.18152876E-02
1.85000000E+03	-5.22266401E+07	2.73608413E+05	-8.16033818E-03	-1.27199877E+00	-1.25769389E-02
1.90000000E+03	-3.94370396E+07	2.35422743E+05	-9.07379308E-03	-1.90932014E+00	-1.28345398E-02
1.95000000E+03	-2.89408504E+07	1.81867824E+05	-9.75310874E-03	-2.54771103E+00	-1.26284894E-02
2.00000000E+03	-2.02539231E+07	1.64983274E+05	-1.02436495E-02	-3.18500722E+00	-1.28255473E-02
2.05000000E+03	-1.25054484E+07	1.44325478E+05	-1.05695217E-02	-3.82664277E+00	-1.28053928E-02
2.08000000E+03	-8.38539251E+06	1.30119416E+05	-1.06944406E-02	-4.20936441E+00	-1.26981273E-02
2.10000000E+03	-6.57080746E+06	8.55694876E+04	-1.07541286E-02	-4.45176203E+00	-1.20665440E-02
2.12000000E+03	-4.96623331E+06	7.47936171E+04	-1.08001331E-02	-4.69188821E+00	-1.19427181E-02
2.20000000E+03	-1.21028744E+06	2.19033218E+04	-1.08885794E-02	-5.61724454E+00	-1.12179527E-02
2.25000000E+03	-3.45518085E+05	1.25349367E+04	-1.09219559E-02	-6.19405489E+00	-1.15487028E-02
2.30000000E+03	1.80308606E-25	-4.65793138E-07	-1.09314160E-02	-6.76567893E+00	-1.09314160E-02

TRW SYSTEMS

Saturn 1B/Contour

k = 154
Mode 3

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
7.70782352E+01	5.94705433E+03	9.96308290E+02	9.96308290E+02	9.96308290E+02	0.
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.12662706E-02	1.53061739E+00	-1.12662706E-02
5.00000000E+01	2.35312730E+06	1.30405152E+05	-1.12539895E-02	9.60657714E-01	-1.16299252E-02
1.00000000E+02	1.44018873E+07	3.35204800E+05	-1.11042745E-02	3.65775740E-01	-1.20793789E-02
1.50000000E+02	3.22132559E+07	3.53824699E+05	-1.06394250E-02	-2.31359365E-01	-1.16781170E-02
2.00000000E+02	4.83849534E+07	2.89024561E+05	-9.82786997E-03	-7.92075216E-01	-1.06841731E-02
2.50000000E+02	6.07939721E+07	2.00252099E+05	-8.72867678E-03	-1.29395045E+00	-9.32750339E-03
3.00000000E+02	6.90572505E+07	1.30853541E+05	-7.42435815E-03	-1.72328267E+00	-7.81934123E-03
3.50000000E+02	7.40678029E+07	7.26486532E+04	-5.98823868E-03	-2.07420319E+00	-6.20961341E-03
4.00000000E+02	7.67316272E+07	3.88887823E+04	-4.47741750E-03	-2.34421686E+00	-4.59705616E-03
4.50000000E+02	7.75150651E+07	-8.15315529E+03	-2.93102871E-03	-2.53190947E+00	-2.90570312E-03
5.00000000E+02	7.58697277E+07	-5.79899859E+04	-1.39302601E-03	-2.63473179E+00	-1.21113371E-03
5.50000000E+02	7.16966090E+07	-1.08995982E+05	8.68895023E-05	-2.65387696E+00	4.32145133E-04
6.00000000E+02	6.49769751E+07	-1.59594853E+05	1.45784344E-03	-2.59330099E+00	1.96841960E-03
6.50000000E+02	5.57685573E+07	-2.08313198E+05	2.66935999E-03	-2.45973932E+00	3.34251181E-03
7.00000000E+02	4.41990784E+07	-2.53833451E+05	3.67283084E-03	-2.26263824E+00	4.50142867E-03
7.50000000E+02	3.04571778E+07	-2.95044744E+05	4.42282854E-03	-2.01400750E+00	5.39585920E-03
8.00000000E+02	1.47808758E+07	-3.31090229E+05	4.87821341E-03	-1.72820295E+00	5.98146523E-03
8.50000000E+02	-2.55621398E+06	-3.61409655E+05	5.00298684E-03	-1.42165092E+00	6.21991400E-03
9.00000000E+02	-2.12606599E+07	-3.85776179E+05	4.76684846E-03	-1.11252838E+00	6.07960645E-03
9.48000000E+02	-4.02286511E+07	-4.03691101E+05	4.17792648E-03	-8.31517094E-01	5.56578596E-03
9.62000000E+02	-4.59107116E+07	-4.07963267E+05	3.93676419E-03	-7.55113214E-01	5.34353407E-03
1.00000000E+03	-6.21658533E+07	-4.40170129E+05	3.76685563E-03	-5.48301791E-01	5.51738813E-03
1.05000000E+03	-8.45748134E+07	-4.57783557E+05	3.40034604E-03	-2.68697114E-01	5.68100058E-03
1.10000000E+03	-1.07816330E+08	-4.67969071E+05	2.77577058E-03	2.06438884E-02	5.89556439E-03
1.15000000E+03	-1.31159305E+08	-4.64875171E+05	1.87726865E-03	2.93321102E-01	4.97643646E-03
1.15500000E+03	-1.33466276E+08	-4.57818832E+05	1.77778314E-03	3.17839259E-01	4.82990869E-03
1.18600000E+03	-1.46349075E+08	-3.25858677E+05	1.14954286E-03	4.46263466E-01	2.91094111E-03
1.20000000E+03	-1.49976978E+08	-1.90771914E+05	8.97847860E-04	4.80212636E-01	1.92904740E-03
1.25000000E+03	-1.42389916E+08	4.91412763E+05	-6.40187642E-05	4.57499621E-01	-2.87209169E-03
1.28000000E+03	-1.23687992E+08	7.43256507E+05	-5.81440624E-04	3.40768630E-01	-4.82862066E-03
1.30000000E+03	-1.08127118E+08	8.09768433E+05	-8.04552207E-04	2.57699471E-01	-4.40352302E-03

TRW SYSTEMS

1.35000000E+03	-6.70092963E+07	8.29529417E+05	-1.22594987E-03	2.33669551E-02	-4.91274728E-03
1.40000000E+03	-2.57393382E+07	8.15466323E+05	-1.44862181E-03	-2.27746534E-01	-5.07291658E-03
1.45000000E+03	1.39536922E+07	7.66470695E+05	-1.47597079E-03	-4.78070385E-01	-4.88250722E-03
1.50000000E+03	5.03459680E+07	6.83851162E+05	-1.31974828E-03	-7.10436222E-01	-4.35908678E-03
1.55000000E+03	8.18357747E+07	5.70764088E+05	-9.09457634E-04	-9.40979542E-01	-6.61709851E-03
1.60000000E+03	1.07313216E+08	4.74550267E+05	9.05702795E-05	-1.21733605E+00	-4.65493239E-03
1.65000000E+03	1.29756994E+08	4.14535603E+05	1.34093314E-03	-1.40697206E+00	-2.80442289E-03
1.68000000E+03	1.40891149E+08	3.10126934E+05	2.19725693E-03	-1.46541607E+00	-9.04012405E-04
1.70000000E+03	1.45887368E+08	1.81849972E+05	2.80189996E-03	-1.46542118E+00	9.83400245E-04
1.74400000E+03	1.45183201E+08	-2.30887296E+05	5.39053064E-03	-1.27370849E+00	9.20231324E-03
1.75000000E+03	1.43646578E+08	-2.80120566E+05	5.73718540E-03	-1.21497180E+00	1.03558262E-02
1.80000000E+03	1.23773424E+08	-4.54324676E+05	8.42539522E-03	-5.33429136E-01	1.58368908E-02
1.85000000E+03	1.00793283E+08	-4.59063123E+05	1.06714633E-02	3.18812092E-01	1.80820061E-02
1.90000000E+03	7.84779956E+07	-4.27143838E+05	1.24615168E-02	1.25735836E+00	1.92849008E-02
1.95000000E+03	5.87326905E+07	-3.56051768E+05	1.38276994E-02	2.23007880E+00	1.94569764E-02
2.00000000E+03	4.15696682E+07	-3.28821536E+05	1.48284541E-02	3.21789896E+00	1.99743310E-02
2.05000000E+03	2.60168735E+07	-2.91619516E+05	1.55012193E-02	4.21962494E+00	2.00189500E-02
2.08000000E+03	1.76662157E+07	-2.64492603E+05	1.57625040E-02	4.81781563E+00	1.98353806E-02
2.10000000E+03	1.39086072E+07	-1.77723991E+05	1.58885349E-02	5.19212539E+00	1.86143630E-02
2.12000000E+03	1.05668545E+07	-1.56204595E+05	1.59861499E-02	5.56207090E+00	1.83724101E-02
2.20000000E+03	2.62299353E+06	-4.71916313E+04	1.61757510E-02	6.97080833E+00	1.68853996E-02
2.25000000E+03	7.52506996E+05	-2.72332661E+04	1.62482486E-02	7.84966930E+00	1.76099120E-02
2.30000000E+03	0.	-2.62108854E-09	1.62688798E-02	8.71770304E+00	1.62688798E-02

TRW SYSTEMS

Saturn 1B/Centaur

t = 154
Mode 4

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.15898309E+02	1.34324179E+04	9.96308290E+02	9.96308290E+02	9.96308290E+02	0.

STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	-Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.22418691E-02	1.55277866E+00	-1.22418691E-02
5.00000000E+01	5.30317476E+06	2.91285500E+05	-1.22140708E-02	9.25707178E-01	-1.30537970E-02
1.00000000E+02	3.12893298E+07	6.98396984E+05	-1.18837083E-02	2.45778486E-01	-1.39153319E-02
1.50000000E+02	6.67361643E+07	6.65900175E+05	-1.09003515E-02	-4.30373997E-01	-1.28551760E-02
2.00000000E+02	9.47780921E+07	4.53393860E+05	-9.26706942E-03	-1.01957089E+00	-1.06103552E-02
2.50000000E+02	1.11774970E+08	2.11694051E+05	-7.18136830E-03	-1.48276616E+00	-7.81441051E-03
3.00000000E+02	1.17964330E+08	3.98739446E+04	-4.86960858E-03	-1.80313001E+00	-4.98996859E-03
3.50000000E+02	1.16433925E+08	-9.21567740E+04	-2.51459506E-03	-1.98294741E+00	-2.23377524E-03
4.00000000E+02	1.09789567E+08	-1.62220396E+05	-2.46512117E-04	-2.03106575E+00	2.52547752E-04
4.50000000E+02	9.94854555E+07	-2.49414584E+05	1.85350964E-03	-1.95816817E+00	2.62824916E-03
5.00000000E+02	8.49429230E+07	-3.30939926E+05	3.70459193E-03	-1.77260028E+00	4.74262326E-03
5.50000000E+02	6.65627533E+07	-4.02215250E+05	5.2259219E-03	-1.48986878E+00	6.49964905E-03
6.00000000E+02	4.49562326E+07	-4.59434396E+05	6.34555317E-03	-1.13000014E+00	7.81537655E-03
6.50000000E+02	2.09017248E+07	-4.99747994E+05	7.00749389E-03	-7.16821375E-01	8.62240007E-03
7.00000000E+02	-4.70698411E+06	-5.21409434E+05	7.17124683E-03	-2.77042006E-01	8.87330273E-03
7.50000000E+02	-3.09185844E+07	-5.23877596E+05	6.81519590E-03	1.60806674E-01	8.54289644E-03
8.00000000E+02	-5.67860892E+07	-5.07871458E+05	5.93681308E-03	5.67511531E-01	7.62913155E-03
8.50000000E+02	-8.14301622E+07	-4.75374650E+05	4.55193898E-03	9.14328128E-01	6.15260546E-03
9.00000000E+02	-1.04101436E+08	-4.29590998E+05	2.69280300E-03	1.17407131E+00	4.15465847E-03
9.48000000E+02	-1.23487455E+08	-3.77152544E+05	5.03918039E-04	1.31858135E+00	1.80053996E-03
9.62000000E+02	-1.28654529E+08	-3.60960501E+05	-2.02185239E-04	1.33851777E+00	1.04250614E-03
1.00000000E+03	-1.39056115E+08	-2.14704288E+05	-6.24386971E-04	1.36132585E+00	2.29480228E-04
1.05000000E+03	-1.46943956E+08	-7.29215995E+04	-1.33900809E-03	1.34752496E+00	-9.75716367E-04
1.10000000E+03	-1.44605260E+08	1.36286543E+05	-2.28604337E-03	1.24298293E+00	-3.19462032E-03
1.15000000E+03	-1.36503598E+08	1.86365479E+05	-3.34441365E-03	1.04795644E+00	-4.58685018E-03
1.15500000E+03	-1.35436039E+08	2.40448448E+05	-3.44666354E-03	1.02386135E+00	-5.04965320E-03
1.18600000E+03	-1.20693465E+08	8.96692477E+05	-4.02960142E-03	8.15154816E-01	-8.87658778E-03
1.20000000E+03	-1.04594250E+08	1.38736985E+06	-4.22172101E-03	6.70341059E-01	-1.17210175E-02
1.25000000E+03	-2.12029089E+06	2.29676854E+06	-4.59106810E-03	-1.38350115E-01	-1.77154598E-02
1.28000000E+03	6.02063452E+07	1.74297117E+06	-4.47326685E-03	-6.31068024E-01	-1.44331021E-02
1.30000000E+03	9.15079281E+07	1.36830154E+06	-4.32619014E-03	-8.58280370E-01	-1.04075303E-02

TRW SYSTEMS

1.35000000E+03	1.51904458E+08	1.02293628E+06	-3.73413696E-03	-1.32942924E+00	-8.28052043E-03
1.40000000E+03	1.91650634E+08	5.48971920E+05	-2.89877695E-03	-1.67269924E+00	-5.33865215E-03
1.45000000E+03	2.05414533E+08	-7.93794350E+03	-1.93312358E-03	-1.85494599E+00	-1.89784383E-03
1.50000000E+03	1.90363070E+08	-5.94397689E+05	-9.69973057E-04	-1.86032644E+00	1.67179445E-03
1.55000000E+03	1.46414003E+08	-1.15311300E+06	2.46719378E-05	-1.63005455E+00	1.15558019E-02
1.60000000E+03	7.89128339E+07	-1.44440069E+06	1.22378051E-03	-9.20845295E-01	1.56677874E-02
1.65000000E+03	5.31247458E+06	-1.49224539E+06	1.66926628E-03	-1.09286053E-01	1.65917202E-02
1.68000000E+03	-3.92727568E+07	-1.46294485E+06	1.56161799E-03	3.85733619E-01	1.61910665E-02
1.70000000E+03	-6.76048619E+07	-1.35364279E+06	1.33585896E-03	6.98227176E-01	1.48722869E-02
1.74400000E+03	-1.12937565E+08	-5.74708875E+05	-3.03999354E-04	1.47630732E+00	9.18402936E-03
1.75000000E+03	-1.15978836E+08	-4.40555929E+05	-5.78859920E-04	1.52384072E+00	6.68504658E-03
1.80000000E+03	-1.18381069E+08	1.83479308E+05	-2.97459087E-03	1.47500488E+00	-5.96772803E-03
1.85000000E+03	-1.06078257E+08	3.02388786E+05	-5.22911275E-03	1.06932814E+00	-1.01102877E-02
1.90000000E+03	-8.89151121E+07	3.75097378E+05	-7.18511957E-03	4.81985057E-01	-1.31770905E-02
1.95000000E+03	-6.95761278E+07	3.87568691E+05	-8.77107869E-03	-2.25862959E-01	-1.48986469E-02
2.00000000E+03	-5.04684765E+07	3.73830390E+05	-9.97038086E-03	-9.96557394E-01	-1.58206217E-02
2.05000000E+03	-3.24907164E+07	3.42260237E+05	-1.07973422E-02	-1.79719109E+00	-1.60995922E-02
2.08000000E+03	-2.26215193E+07	3.14597049E+05	-1.11271857E-02	-2.27879373E+00	-1.59716121E-02
2.10000000E+03	-1.79717941E+07	2.21266351E+05	-1.12892647E-02	-2.57447979E+00	-1.46829204E-02
2.12000000E+03	-1.37882218E+07	1.96652045E+05	-1.14159766E-02	-2.86562805E+00	-1.44201326E-02
2.20000000E+03	-3.53959899E+06	6.30073425E+04	-1.16668210E-02	-3.94666657E+00	-1.26142998E-02
2.25000000E+03	-1.02438899E+06	3.69131747E+04	-1.17650471E-02	-4.62431408E+00	-1.36107058E-02
2.30000000E+03	-2.05508280E-23	3.16241034E-04	-1.17931990E-02	-5.28834900E+00	-1.17931990E-02

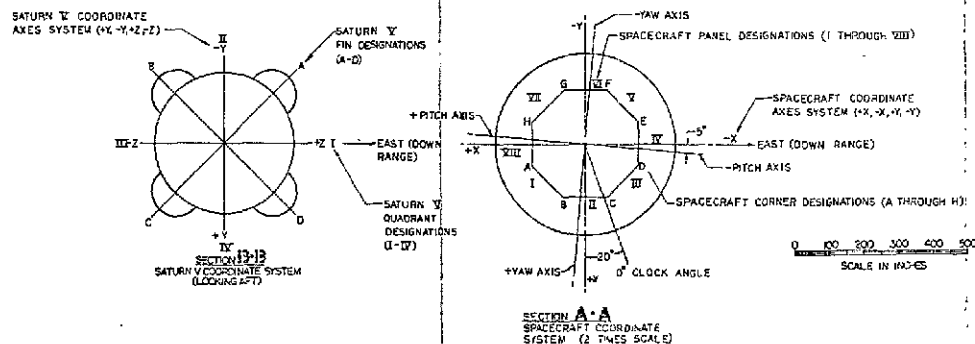
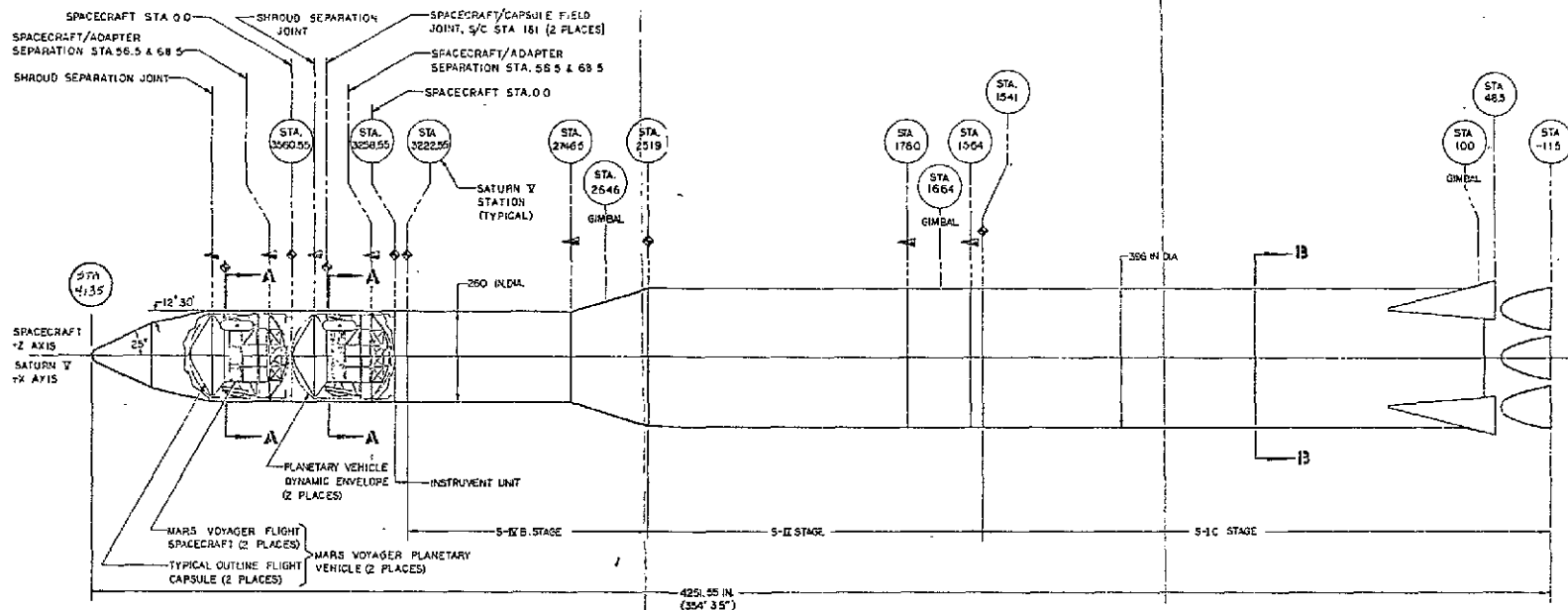
TRW SYSTEMS

Saturn 1B/Centaur

t = 154
Mode 5

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
1.51056662E+02	2.28181150E+04	9.96308290E+02	9.96308290E+02	9.96308290E+02	0.
STATION IN.	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
0.	0.	0.	-1.79656973E-02	-2.21341140E+00	-1.79656973E-02
5.00000000E+01	1.27253723E+07	6.95178067E+05	-1.78988236E-02	1.27919344E+00	-1.99029031E-02
1.00000000E+02	7.31690080E+07	1.57947993E+06	-1.71173560E-02	2.23556688E-01	-2.17120330E-02
1.50000000E+02	1.50153691E+08	1.37093239E+06	-1.48660767E-02	-8.07428937E-01	-1.88906020E-02
2.00000000E+02	2.03145544E+08	7.57116384E+05	-1.12808591E-02	-1.62172214E+00	-1.35239942E-02
2.50000000E+02	2.26185933E+08	1.35973521E+05	-6.93567482E-03	-2.14757202E+00	-7.34228510E-03
3.00000000E+02	2.22495947E+08	-2.67747032E+05	-2.41512095E-03	-2.36989537E+00	-1.60692314E-03
3.50000000E+02	2.01504126E+08	-5.47686554E+05	1.84823016E-03	-2.31861281E+00	3.51713883E-03
4.00000000E+02	1.70233776E+08	-6.78779747E+05	5.57649646E-03	-2.03462268E+00	7.66471557E-03
4.50000000E+02	1.32800935E+08	-8.12693116E+05	8.61801606E-03	-1.56090637E+00	1.11424293E-02
5.00000000E+02	8.96478252E+07	-9.05726092E+05	1.08502658E-02	-9.35891949E-01	1.36911804E-02
5.50000000E+02	4.30682616E+07	-9.48500799E+05	1.21809964E-02	-2.09398954E-01	1.51854672E-02
6.00000000E+02	-4.27049433E+06	-9.35516360E+05	1.25678930E-02	5.63965225E-01	1.55607987E-02
6.50000000E+02	-4.95284900E+07	-8.65385077E+05	1.20240555E-02	1.32804551E+00	1.48204963E-02
7.00000000E+02	-8.98994843E+07	-7.40819543E+05	1.06193879E-02	2.02859969E+00	1.30376722E-02
7.50000000E+02	-1.22810291E+08	-5.68363422E+05	8.47790800E-03	2.61673523E+00	1.03523187E-02
8.00000000E+02	-1.46100437E+08	-3.57876559E+05	5.77124676E-03	3.05208294E+00	6.96375542E-03
8.50000000E+02	-1.58170481E+08	-1.21802172E+05	2.70884968E-03	3.30548761E+00	3.11897810E-03
9.00000000E+02	-1.58089109E+08	1.25741097E+05	-4.74390403E-04	3.36103010E+00	-9.02274859E-04
9.48000000E+02	-1.46382025E+08	3.60464102E+05	-3.41535130E-03	3.22670143E+00	-4.65459962E-03
9.62000000E+02	-1.40871528E+08	4.26499977E+05	-4.22009251E-03	3.15424337E+00	-5.69078209E-03
1.00000000E+03	-1.11804849E+08	9.88188938E+05	-4.62171755E-03	2.87756418E+00	-8.55169084E-03
1.05000000E+03	-5.28572203E+07	1.44749273E+06	-5.03505665E-03	2.37154101E+00	-1.22463923E-02
1.10000000E+03	3.60354173E+07	2.00730874E+06	-5.09140442E-03	1.60135972E+00	-1.84734627E-02
1.15000000E+03	1.38788117E+08	2.09138011E+06	-4.43680655E-03	6.74916028E-01	-1.83793406E-02
1.15500000E+03	1.49387814E+08	2.14713095E+06	-4.32848719E-03	5.82334825E-01	-1.86426936E-02
1.18600000E+03	2.20099415E+08	2.39280781E+06	-3.50768670E-03	7.11430457E-03	-1.64417830E-02
1.20000000E+03	2.53057302E+08	2.27397285E+06	-3.10598412E-03	-2.17396779E-01	-1.53977293E-02
1.25000000E+03	3.08504402E+08	-4.43597467E+05	-1.21826992E-03	-6.43881002E-01	1.31657275E-03
1.28000000E+03	2.73431143E+08	-1.82174738E+06	-7.86888703E-05	-4.62575187E-01	1.03312961E-02
1.30000000E+03	2.33545851E+08	-2.14128219E+06	4.09801271E-04	-2.81868884E-01	9.92661100E-03

1.35000000E+03	1.25014080E+08	-2.15319601E+06	1.27196748E-03	2.44716449E-01	1.08417275E-02
1.40000000E+03	2.29947741E+07	-1.88067746E+06	1.62229163E-03	7.72539231E-01	9.98085812E-03
1.45000000E+03	-5.86631703E+07	-1.34625776E+06	1.52582693E-03	1.21580504E+00	7.50919475E-03
1.50000000E+03	-1.08327322E+08	-6.14758032E+05	1.10972862E-03	1.50342015E+00	3.84198654E-03
1.55000000E+03	-1.18449167E+08	2.17282766E+05	4.11494485E-04	1.58198381E+00	-1.76133318E-03
1.60000000E+03	-8.99927222E+07	7.50653658E+05	-7.10072143E-04	1.28866179E+00	-8.21660872E-03
1.65000000E+03	-4.82033669E+07	9.29591228E+05	-1.44537350E-03	8.15050441E-01	-1.07412858E-02
1.68000000E+03	-1.79422335E+07	1.10063457E+06	-1.65702432E-03	4.65424150E-01	-1.26633700E-02
1.70000000E+03	5.24766115E+06	1.21022597E+06	-1.68453139E-03	1.99947195E-01	-1.37867910E-02
1.74400000E+03	5.51064050E+07	8.71886692E+05	-1.13163810E-03	-6.92508504E-01	-1.55258581E-02
1.75000000E+03	6.00033790E+07	7.60080706E+05	-9.93372241E-04	-7.79684092E-01	-1.35256180E-02
1.80000000E+03	7.85003318E+07	1.13719063E+05	4.46897428E-04	-1.09867801E+00	-1.40822595E-03
1.85000000E+03	7.98637280E+07	-5.81364576E+04	2.04489536E-03	-1.05874341E+00	2.98333697E-03
1.90000000E+03	7.30729868E+07	-2.06943100E+05	3.58669441E-03	-8.08444290E-01	6.89249472E-03
1.95000000E+03	6.00621783E+07	-3.02484475E+05	4.92602963E-03	-3.87835136E-01	9.70839286E-03
2.00000000E+03	4.47259178E+07	-3.07665234E+05	5.97434433E-03	1.27182888E-01	1.07891367E-02
2.05000000E+03	2.96401592E+07	-2.92218368E+05	6.71671862E-03	6.80619060E-01	1.12437266E-02
2.08000000E+03	2.11479075E+07	-2.72635247E+05	7.02085945E-03	1.01810698E+00	1.12191232E-02
2.10000000E+03	1.69454140E+07	-2.01227332E+05	7.17300182E-03	1.22468760E+00	1.02593106E-02
2.12000000E+03	1.31195683E+07	-1.80836882E+05	7.29298992E-03	1.42796246E+00	1.00555454E-02
2.20000000E+03	3.47112043E+06	-6.12037246E+04	7.53469427E-03	2.16955386E+00	8.45505103E-03
2.25000000E+03	1.01228168E+06	-3.63410542E+04	7.63136110E-03	2.63855098E+00	9.44841381E-03
2.30000000E+03	5.85885119E-23	1.75335787E-03	7.65923665E-03	3.09506090E+00	7.65923630E-03

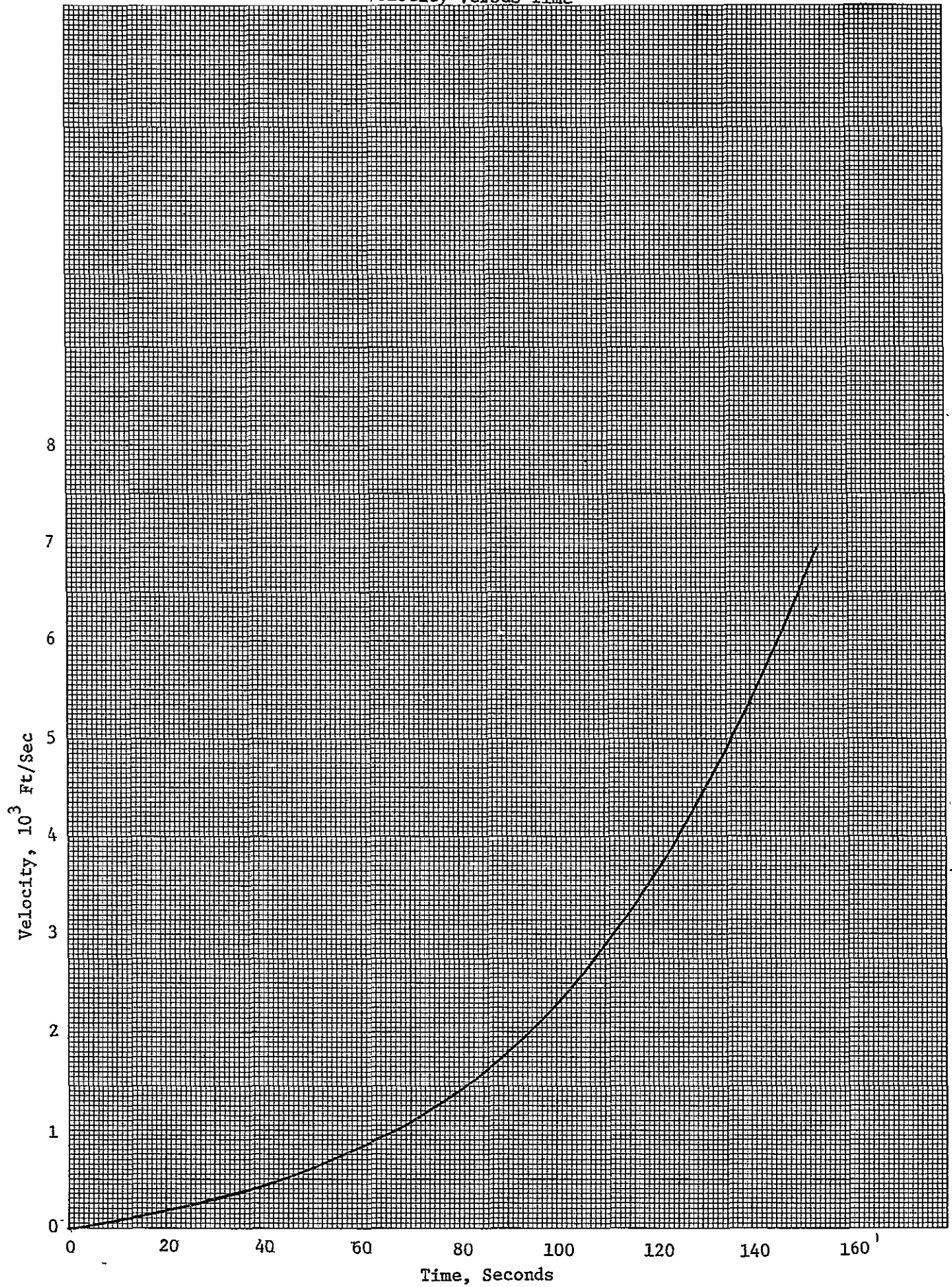


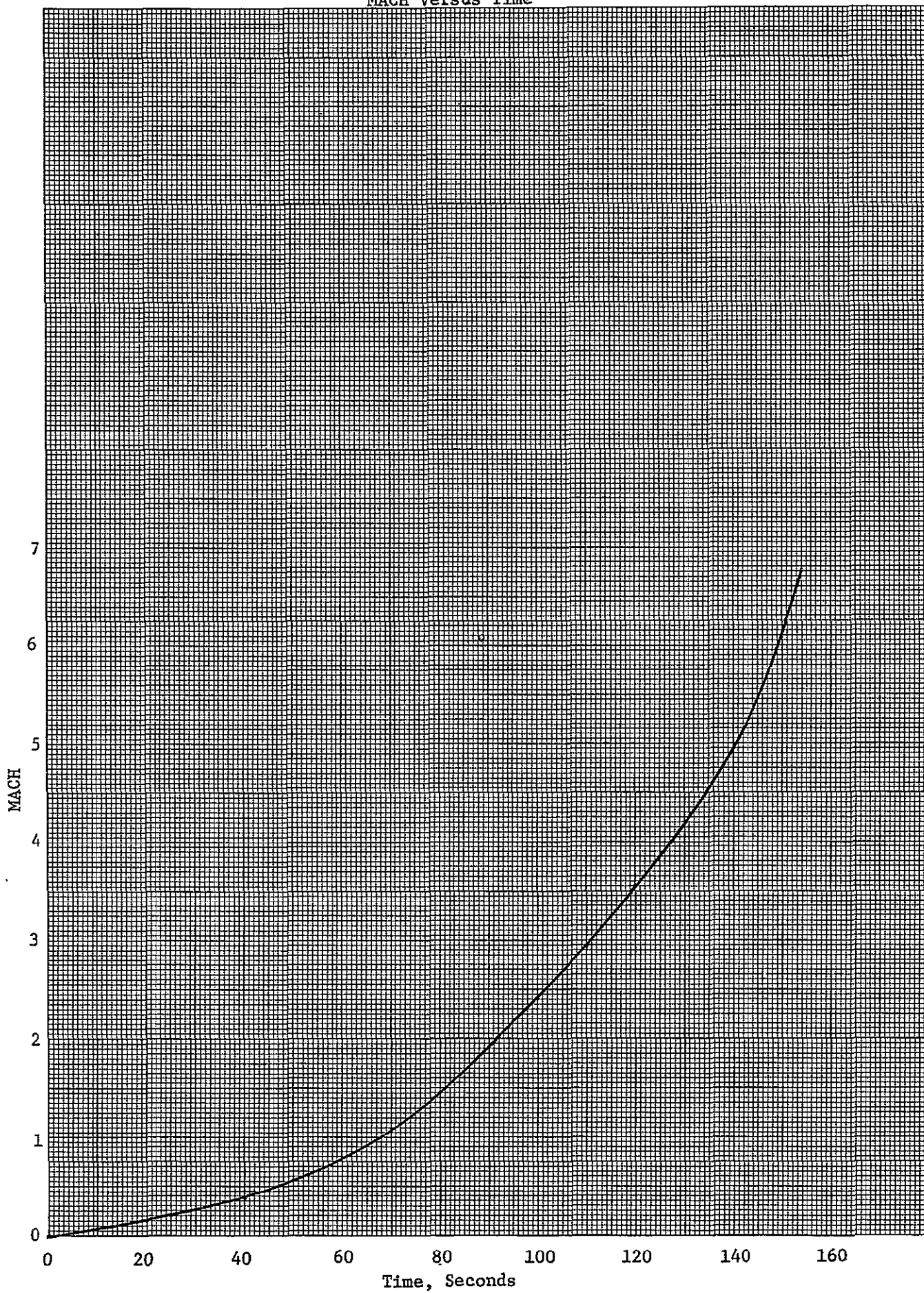
NOTES:
 ◆ FIELD SPICE
 - SEPARATION
 ALL DIMENSIONS ARE IN INCHES

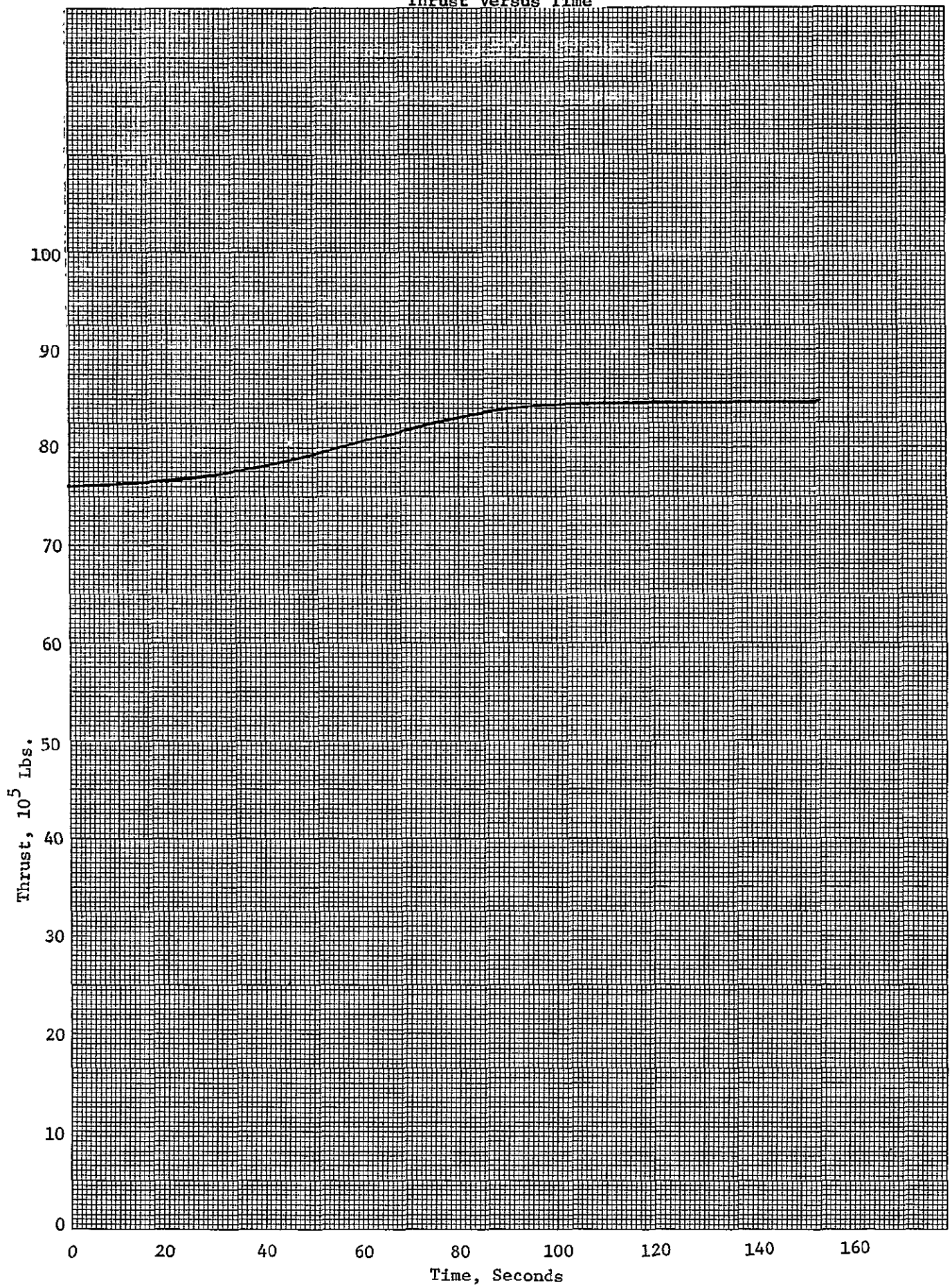
Saturn V (Voyager Pay-
load) Vehicle Configuration

SATURN V/VOYAGER,
Velocity Versus Time

454

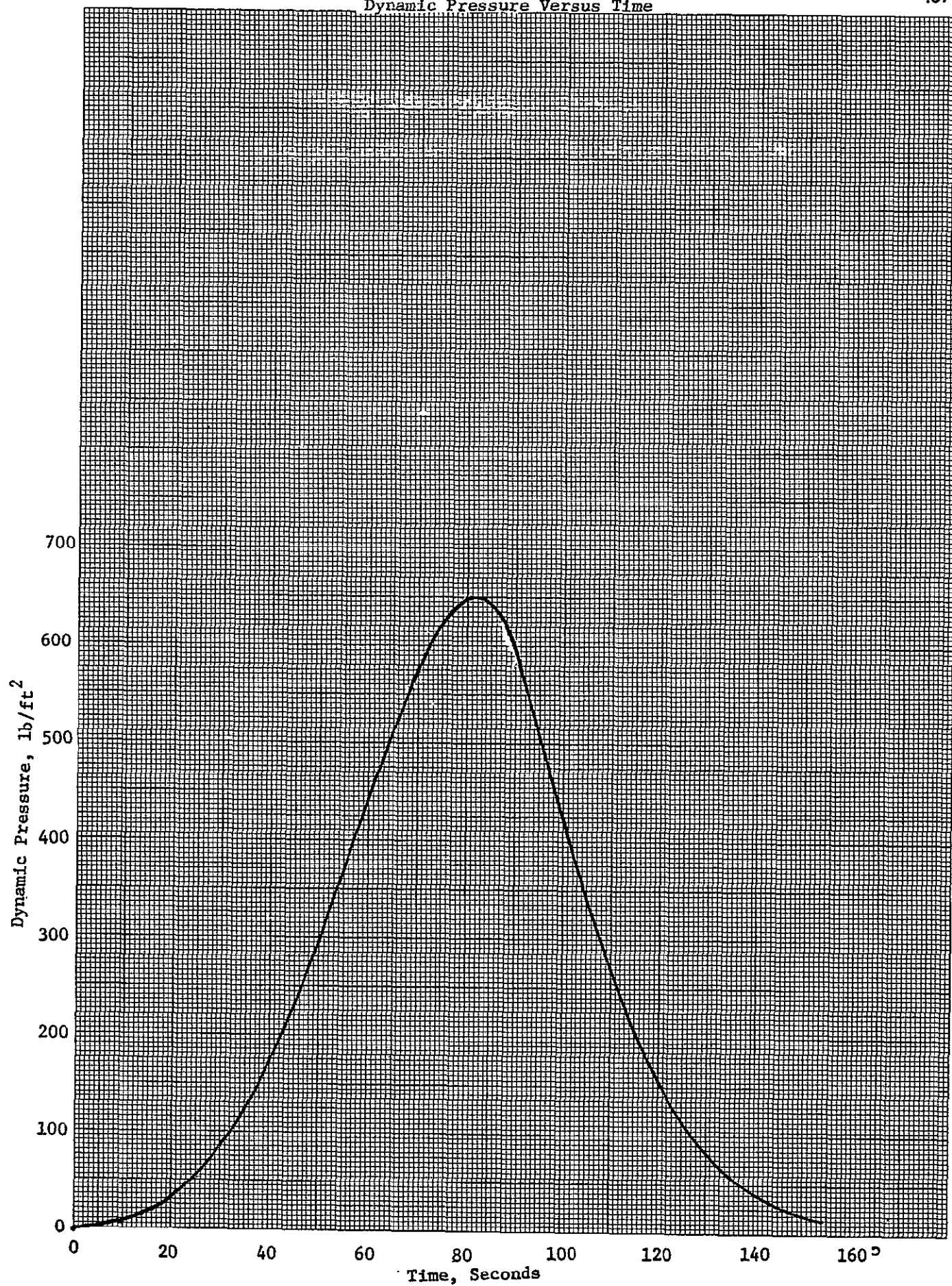


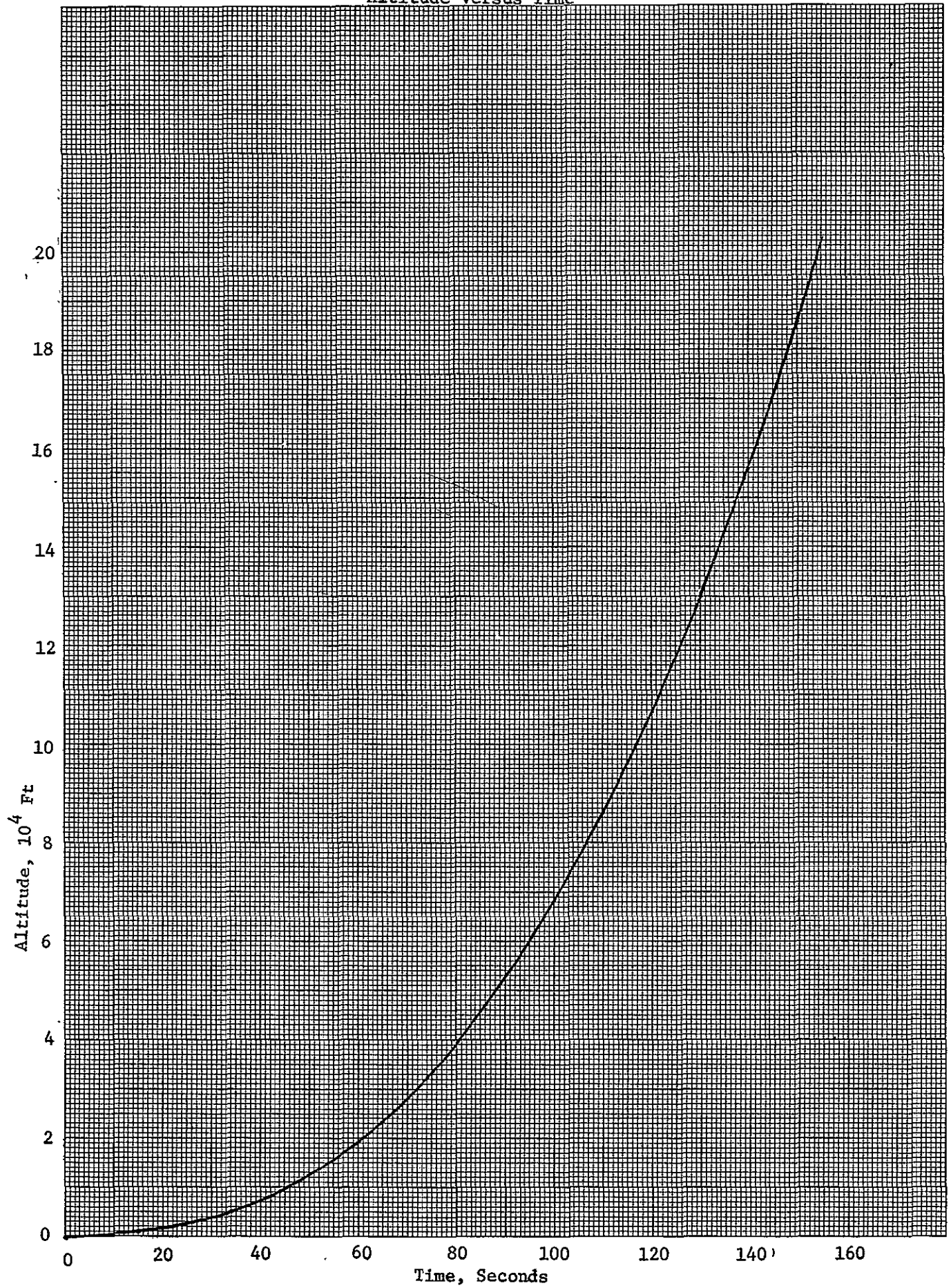




SATURN V/VOYAGER,
Dynamic Pressure Versus Time

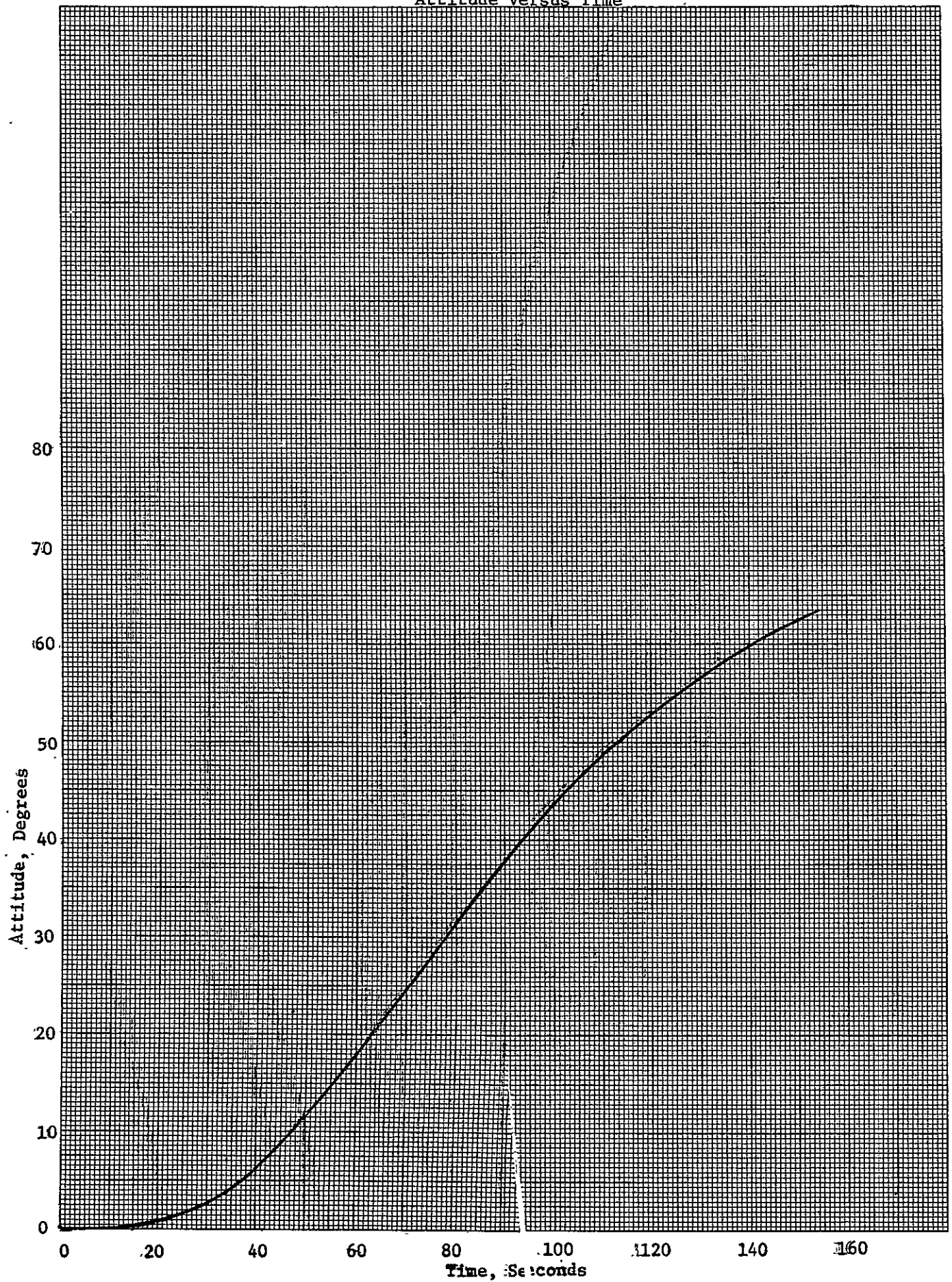
457

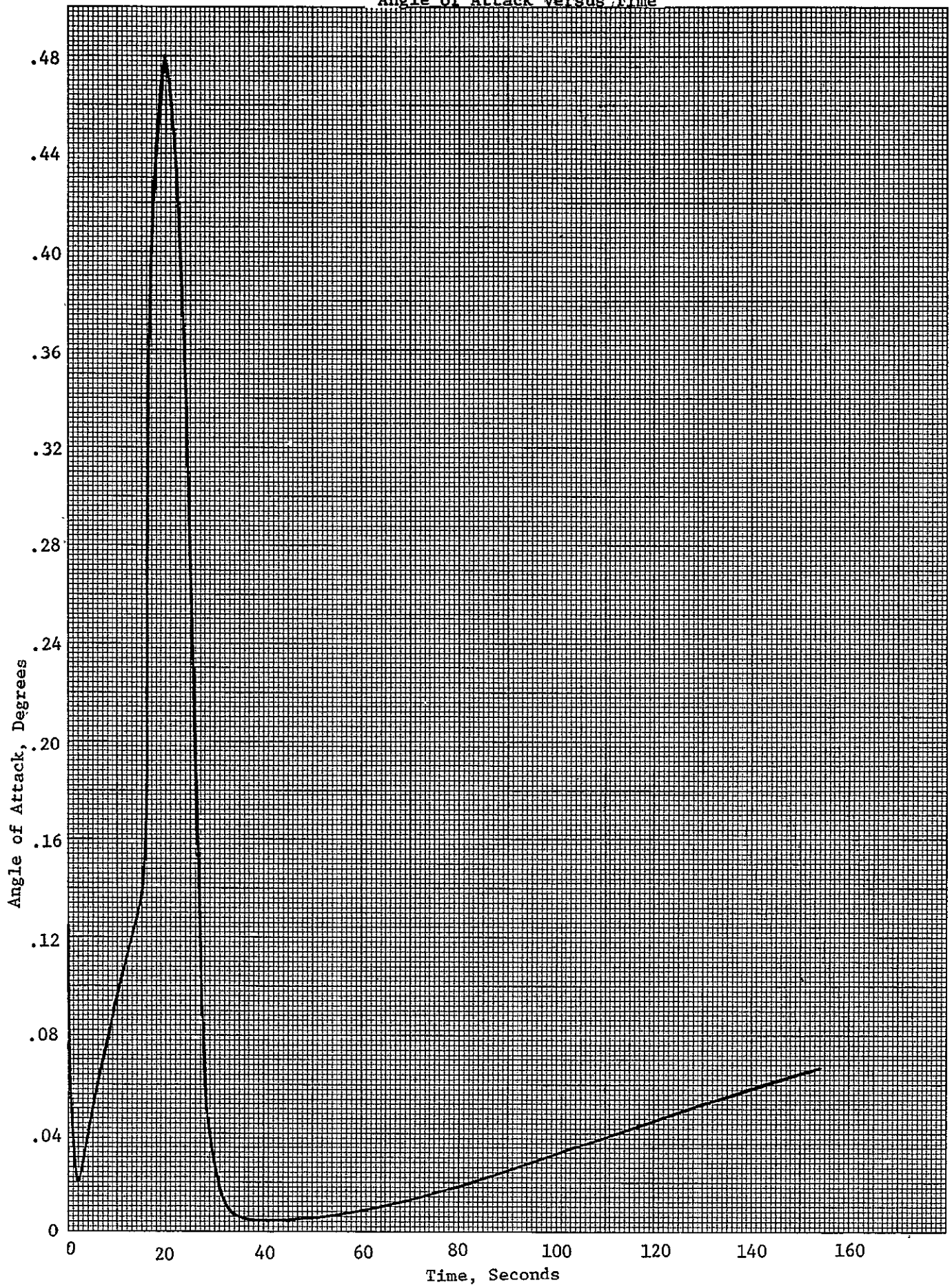




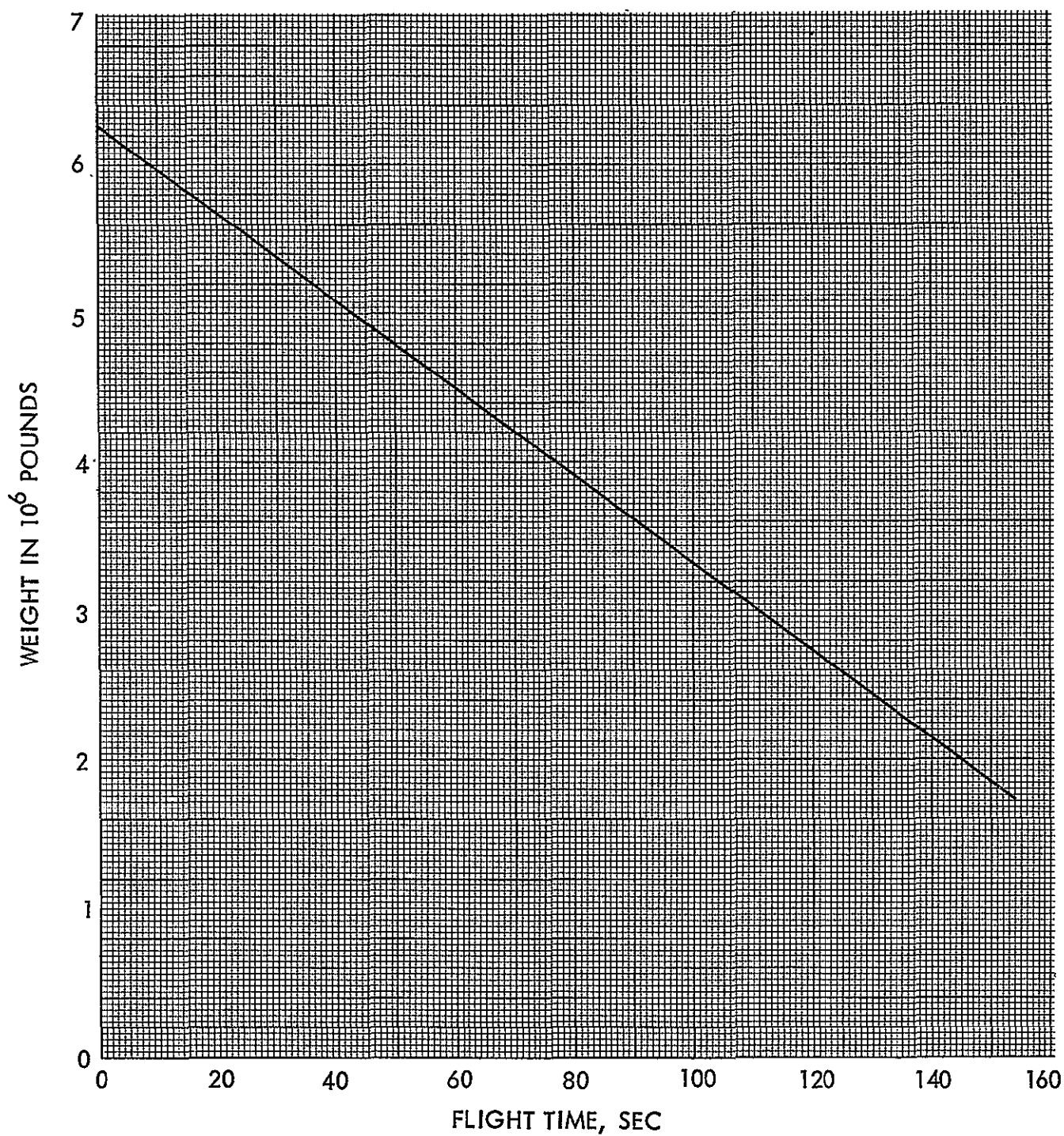
SATURN V/VOYAGER,
Attitude Versus Time

459

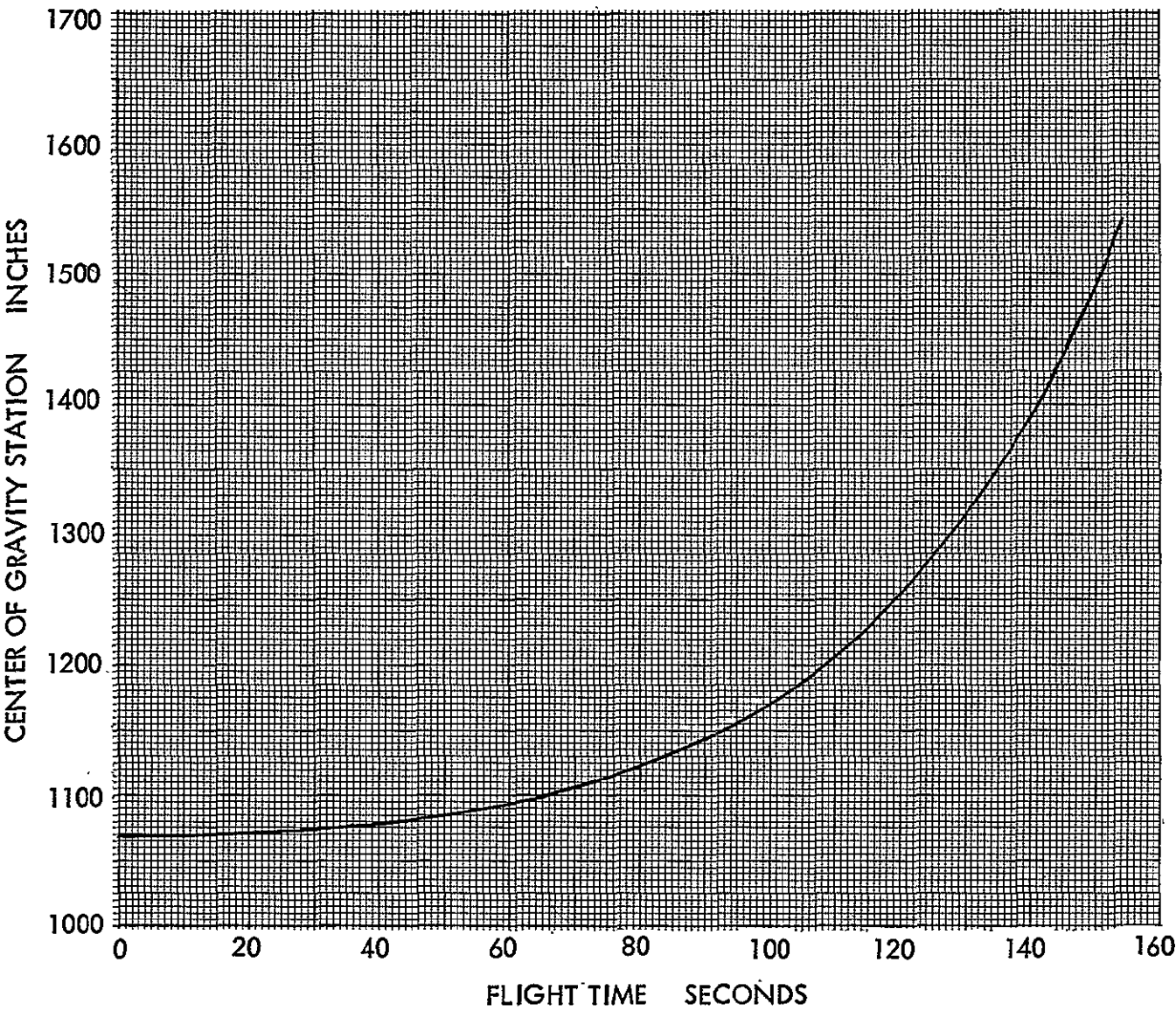




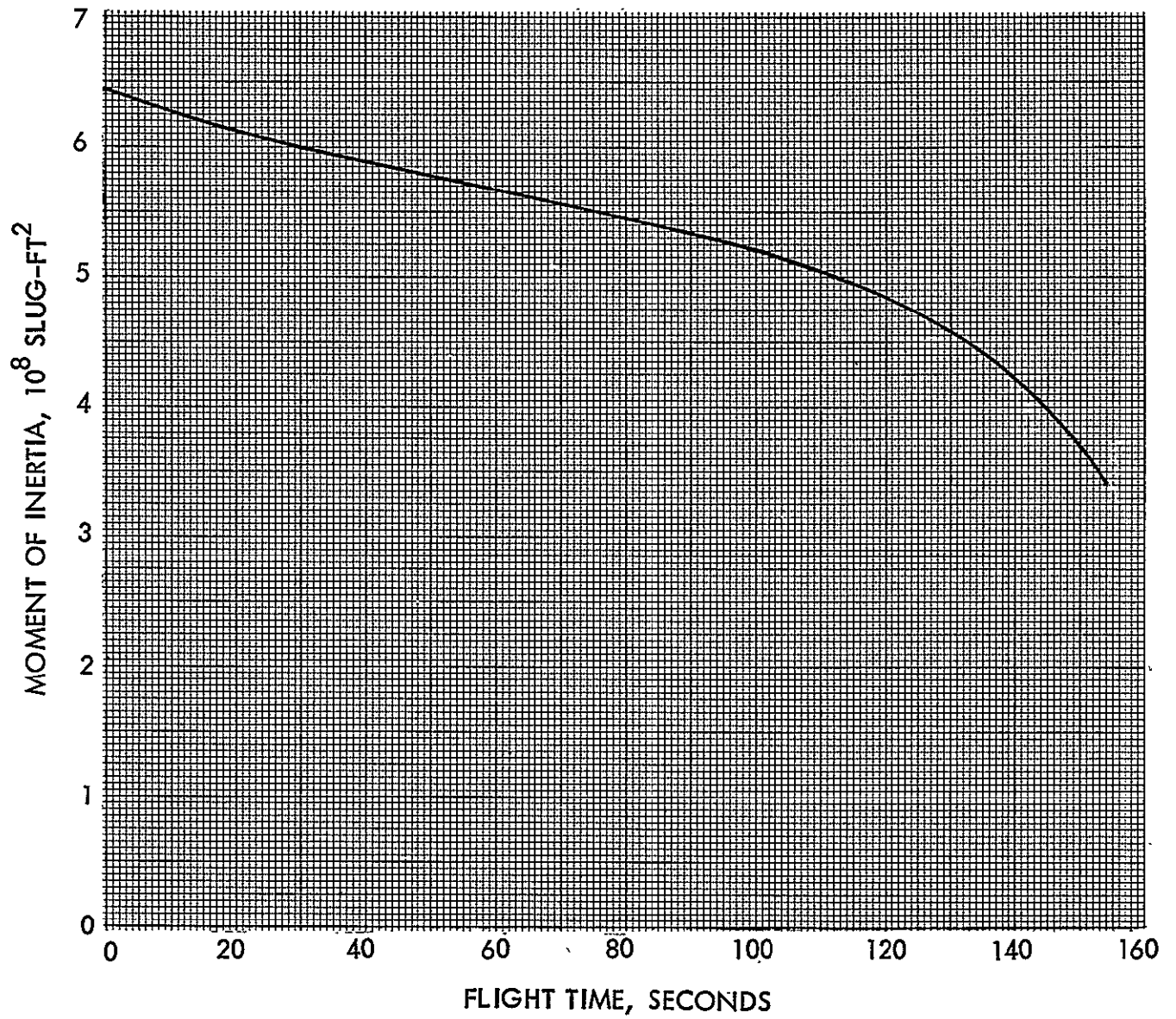
SATURN V/VOYAGER, VEHICLE WEIGHT VERSUS TIME,
STAGE 1C OPERATION



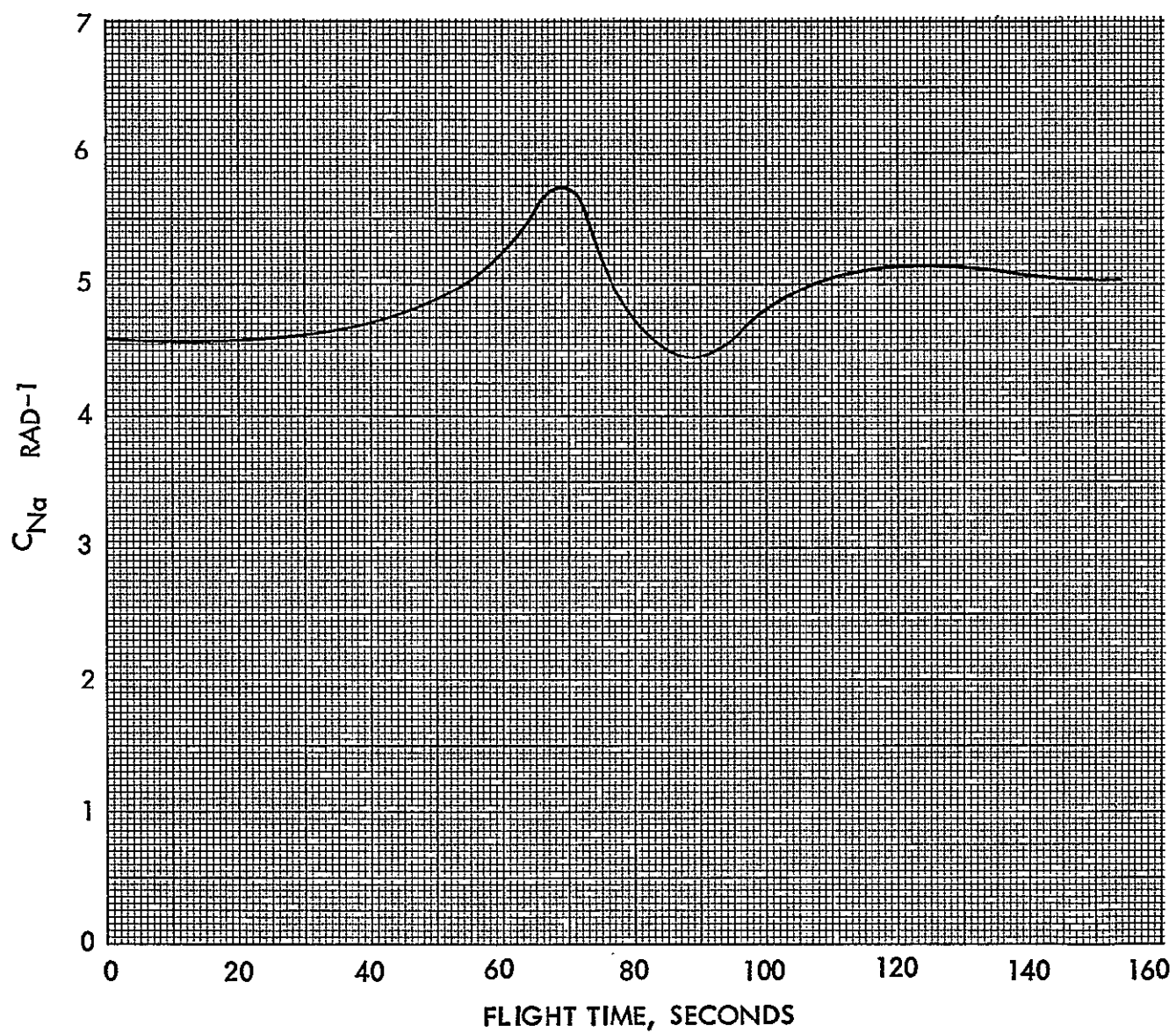
SATURN V/VOYAGER, CENTER OF GRAVITY VERSUS TIME



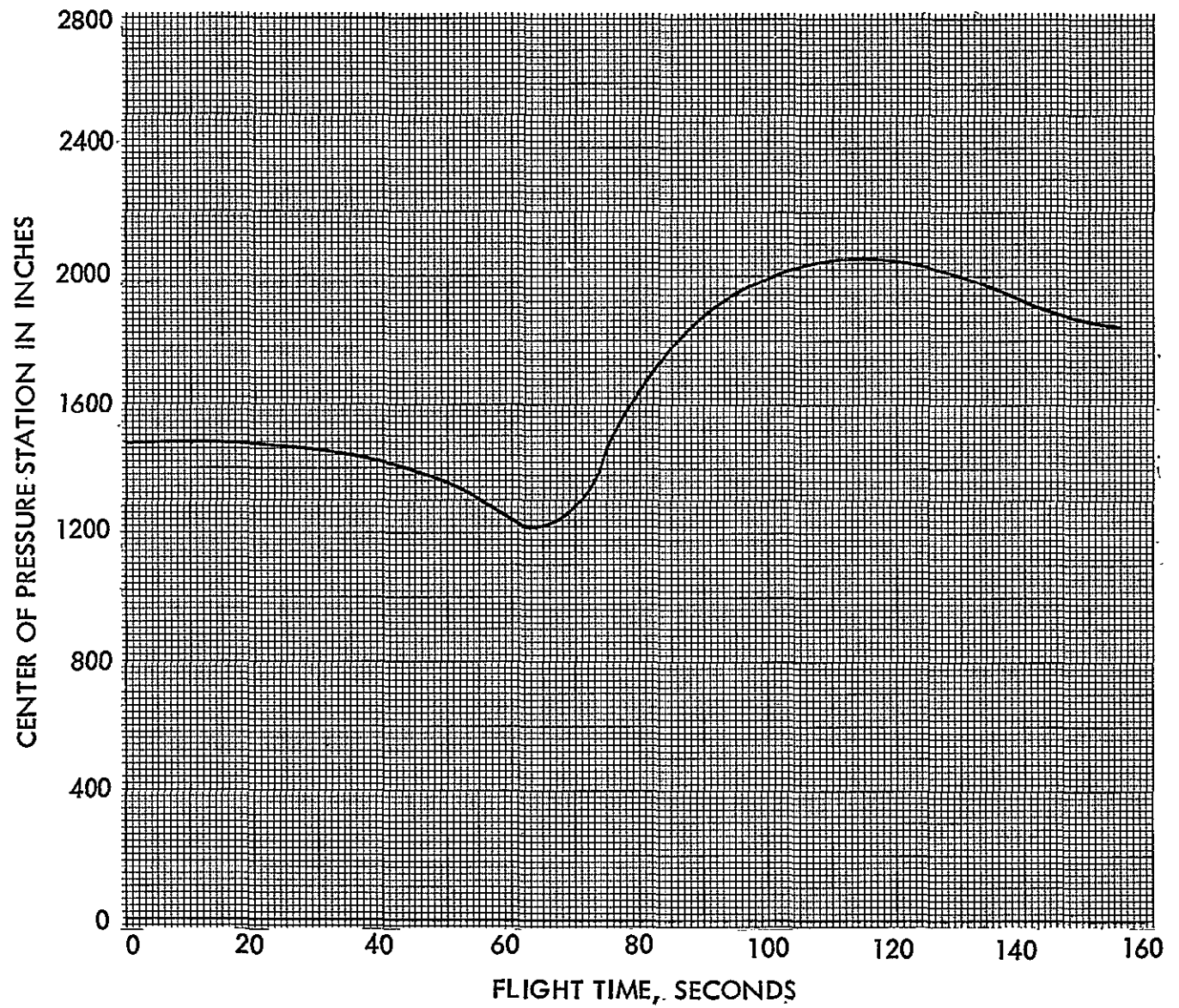
SATURN V/VOYAGER MOMENT OF INERTIA VERSUS TIME



SATURN V/VOYAGER,
NORMAL FORCE COEFFICIENT ($C_{N\alpha}$) VERSUS TIME

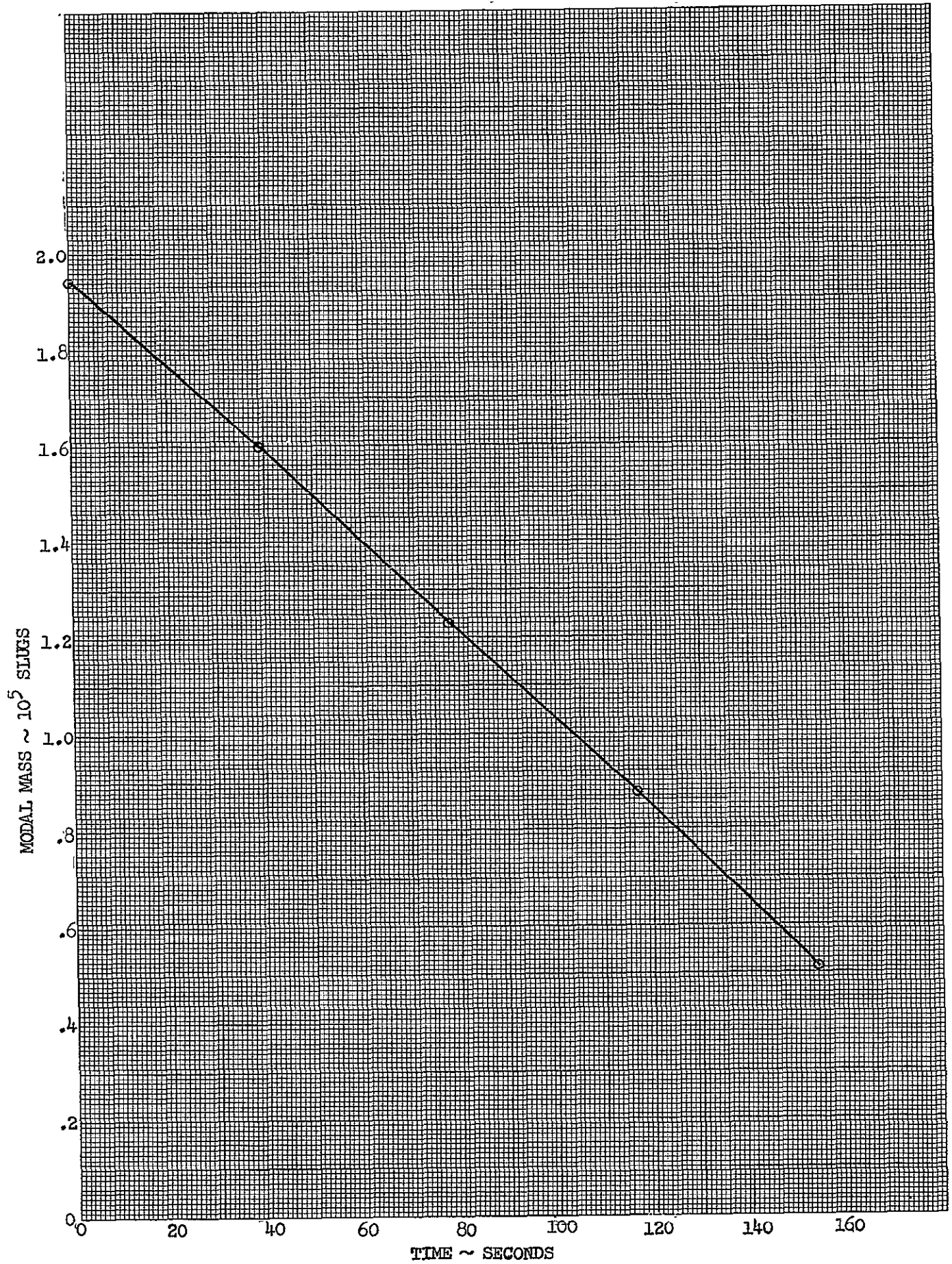


SATURN V/VOYAGER, CENTER OF PRESSURE VERSUS TIME

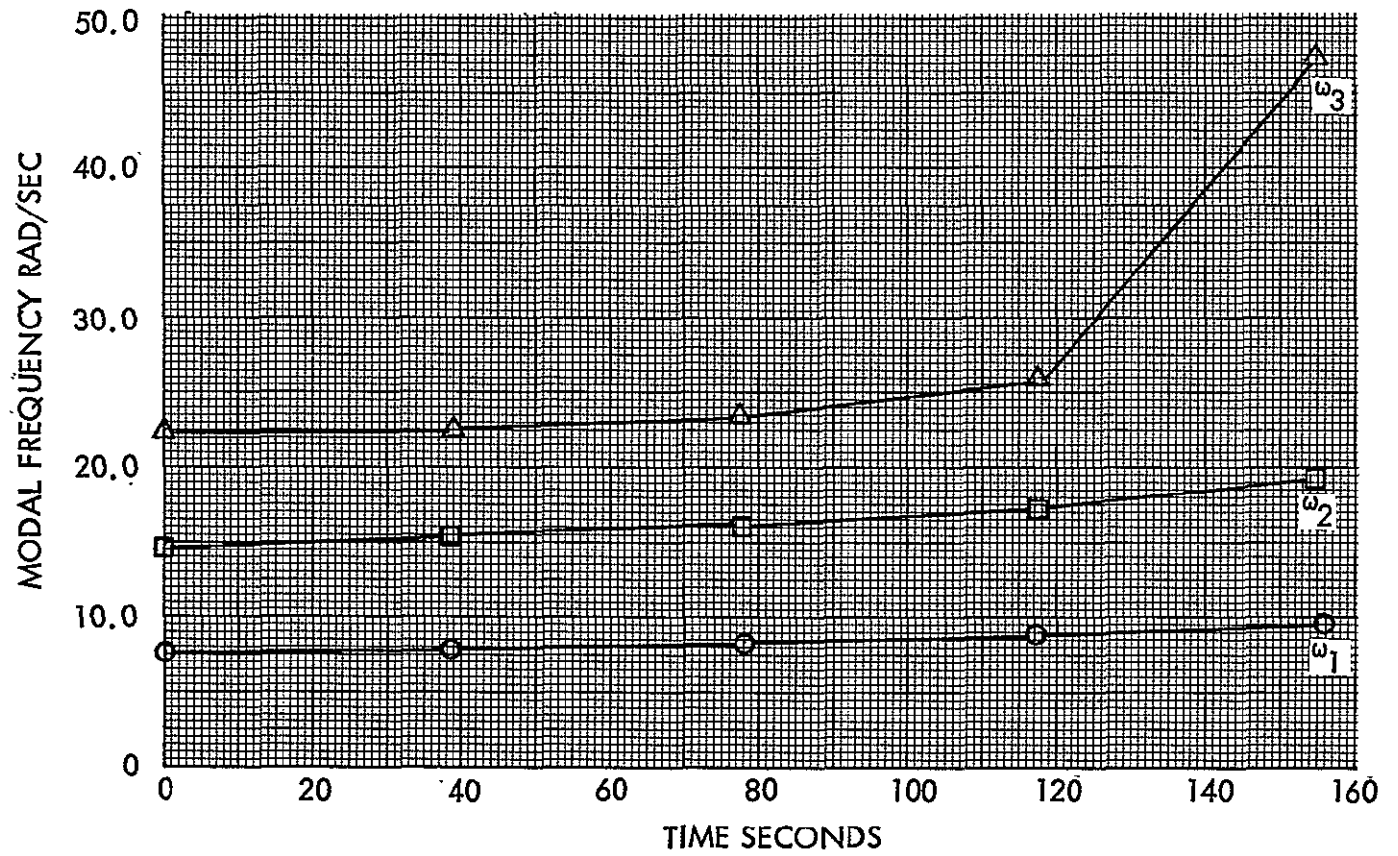


BENDING PLOTS

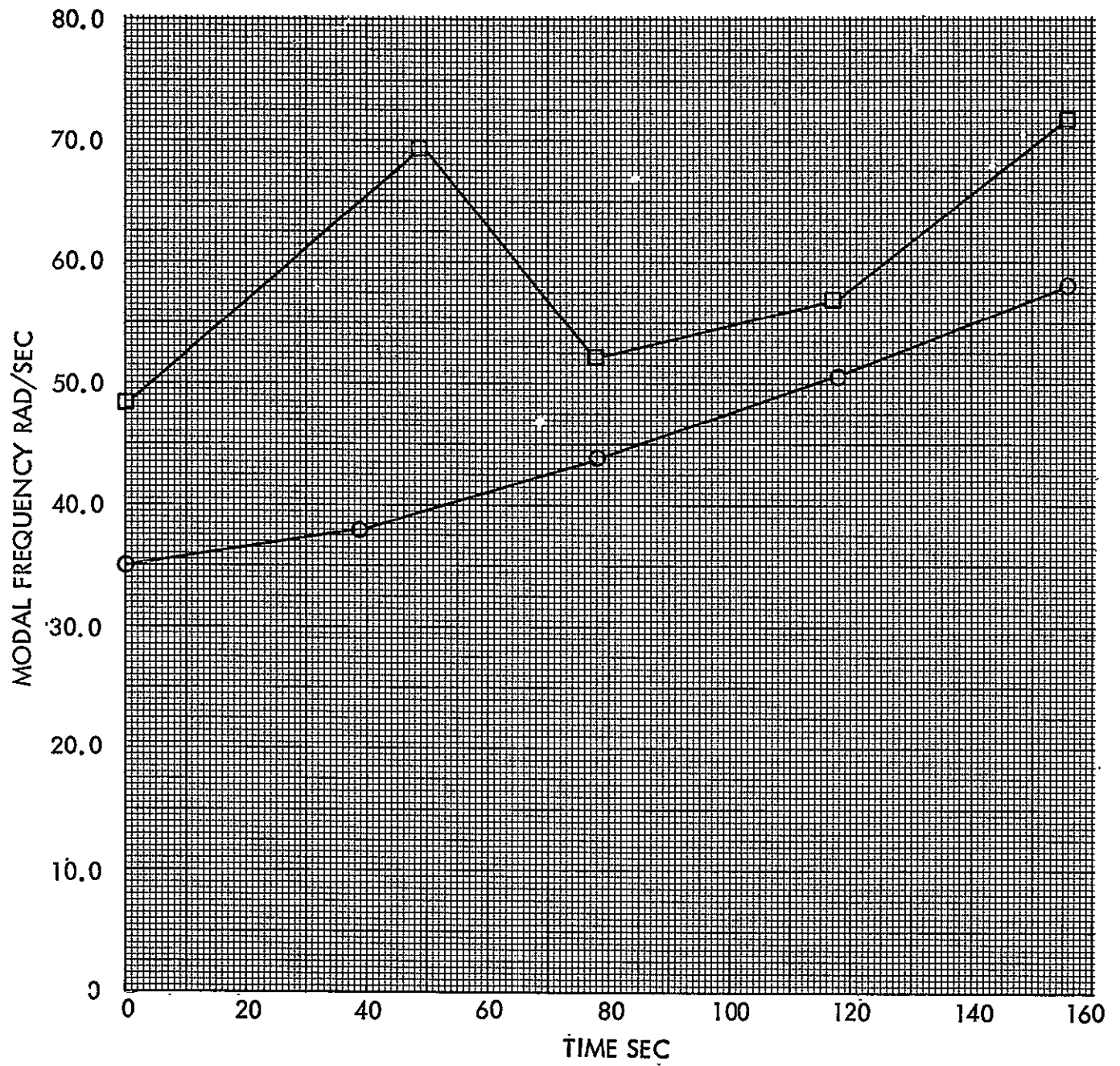
SATURN V/VOYAGER, BENDING MODAL MASS VERSUS TIME



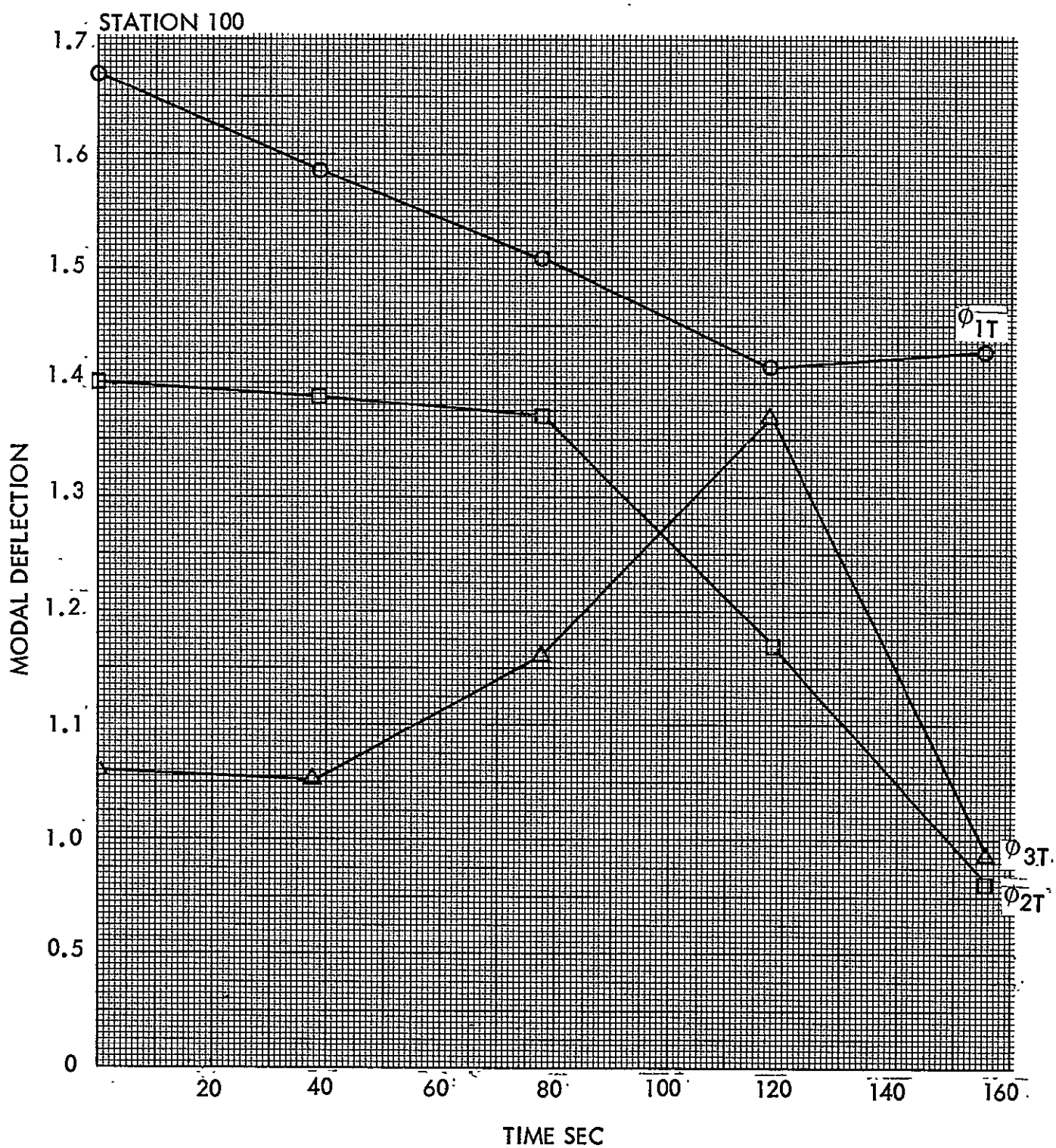
SATURN V/VOYAGER, BENDING MODAL FREQUENCIES

 $(\omega_1, \omega_2, \omega_3)$ VERSUS TIME

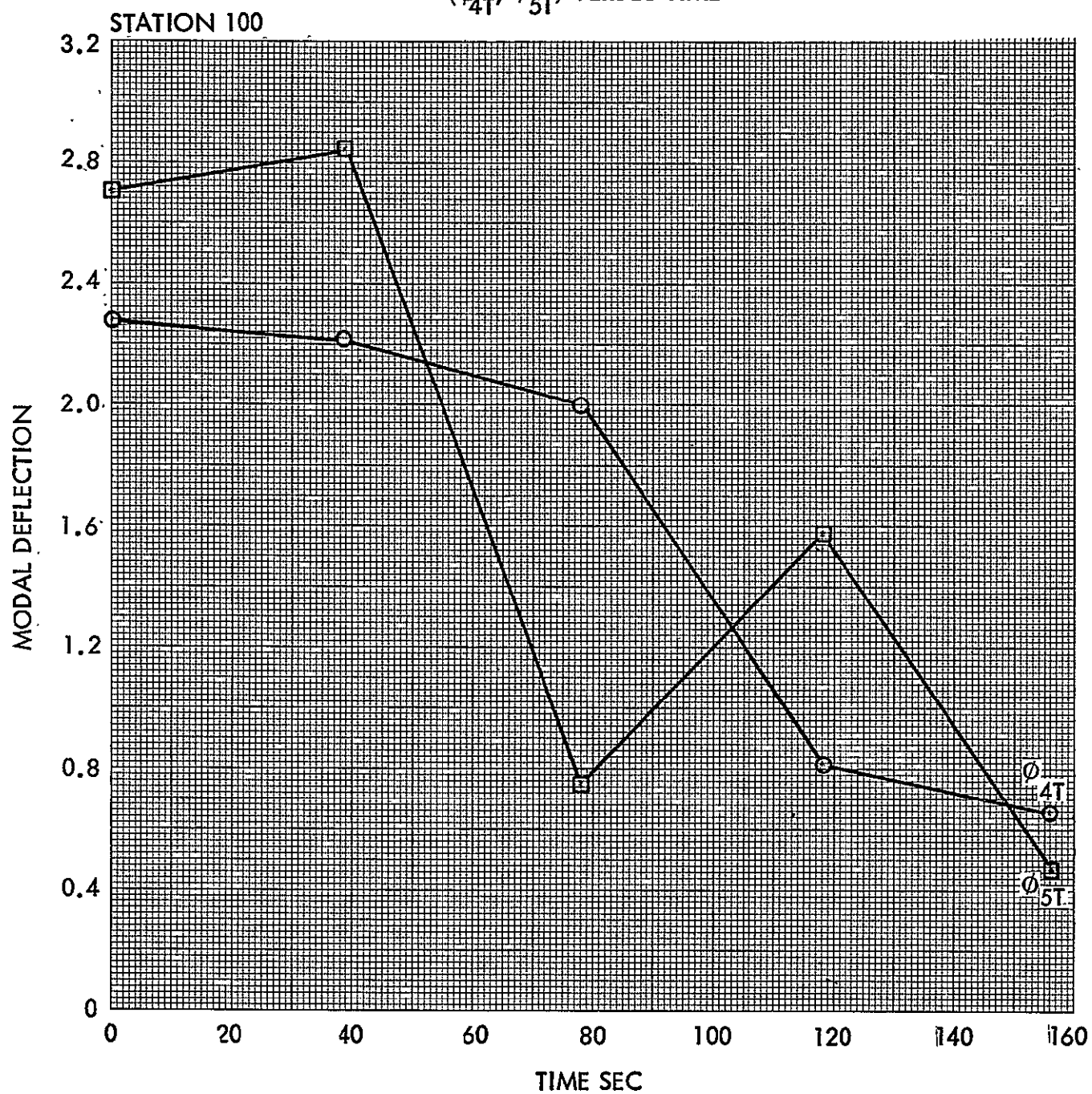
SATURN V/VOYAGER, BENDING MODAL FREQUENCIES
(ω_4 , ω_5) VERSUS TIME



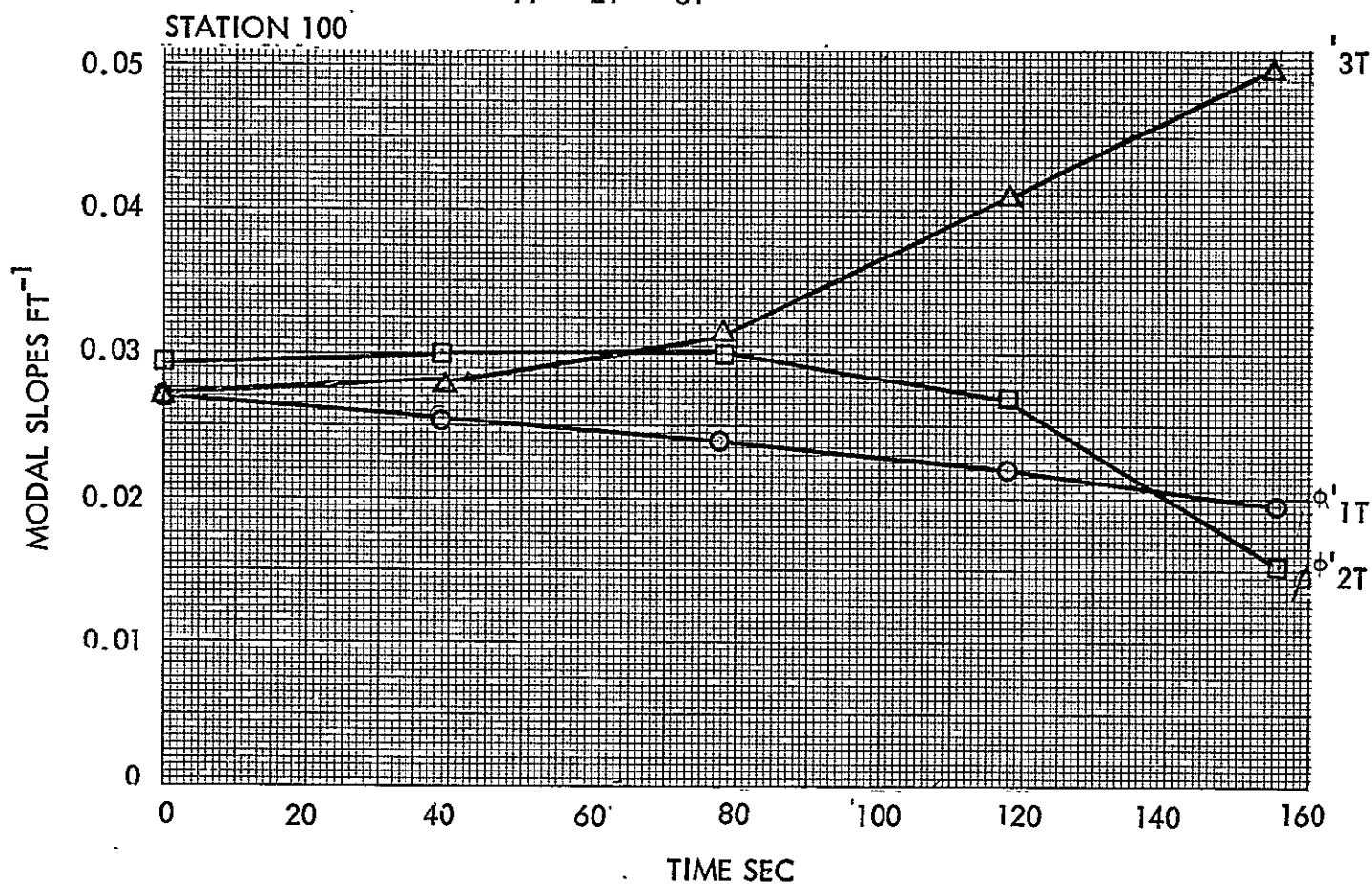
SATURN V/VOYAGER MODAL DEFLECTION AT THE ENGINE GIMBAL
(ϕ_{1T} , ϕ_{2T} , ϕ_{3T}) VERSUS TIME



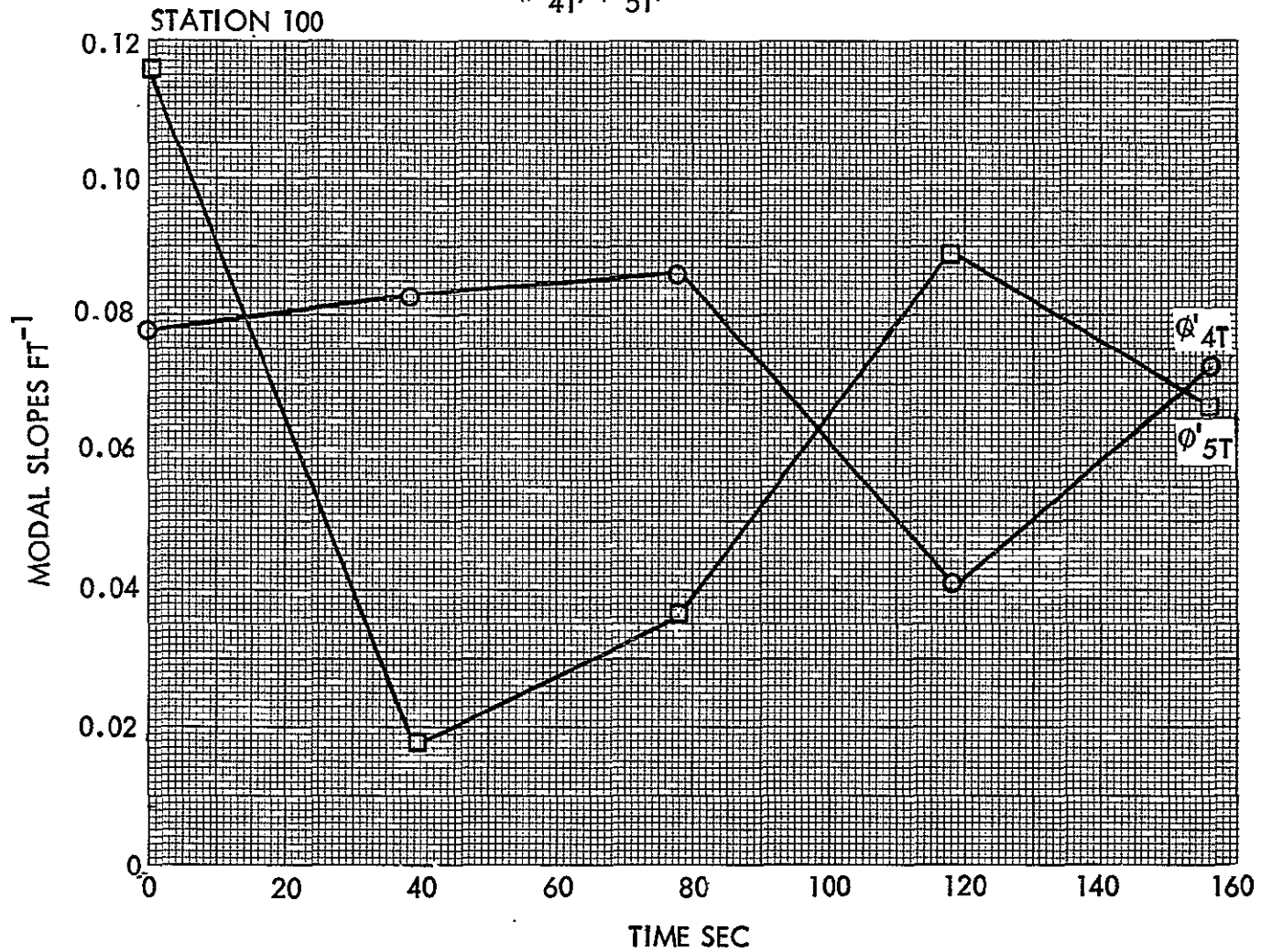
SATURN V/VOYAGER, MODAL DEFLECTION AT THE ENGINE GIMBAL
(ϕ_{4T} , ϕ_{5T}) VERSUS TIME



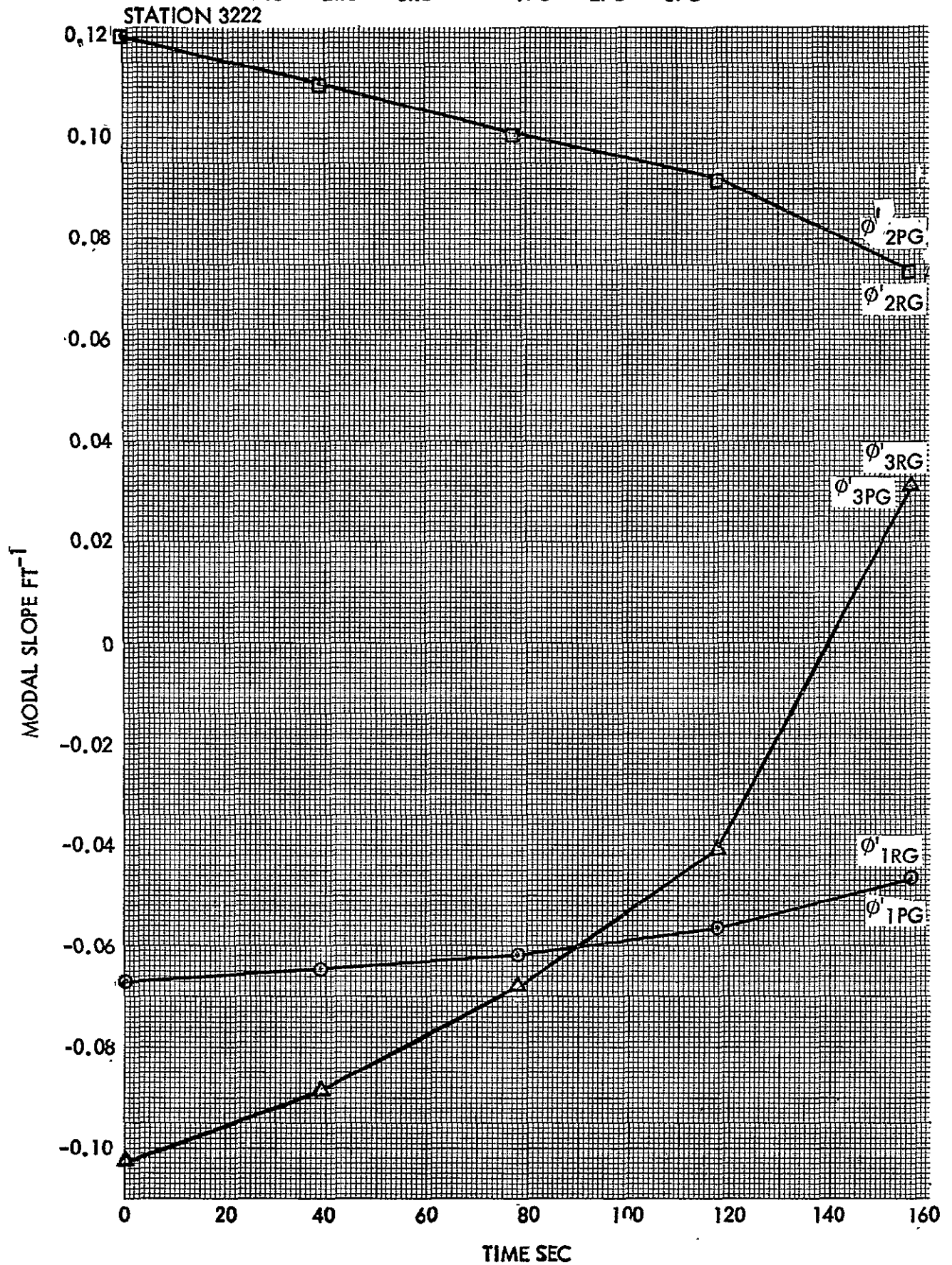
SATURN V/VOYAGER, MODAL SLOPES AT THE ENGINE GIMBAL
(ϕ'_{1T} , ϕ'_{2T} , ϕ'_{3T}) VERSUS TIME



SATURN V/VOYAGER, MODAL SLOPES AT THE ENGINE GIMBAL

 (ϕ'_{4T}, ϕ'_{5T}) VERSUS TIME

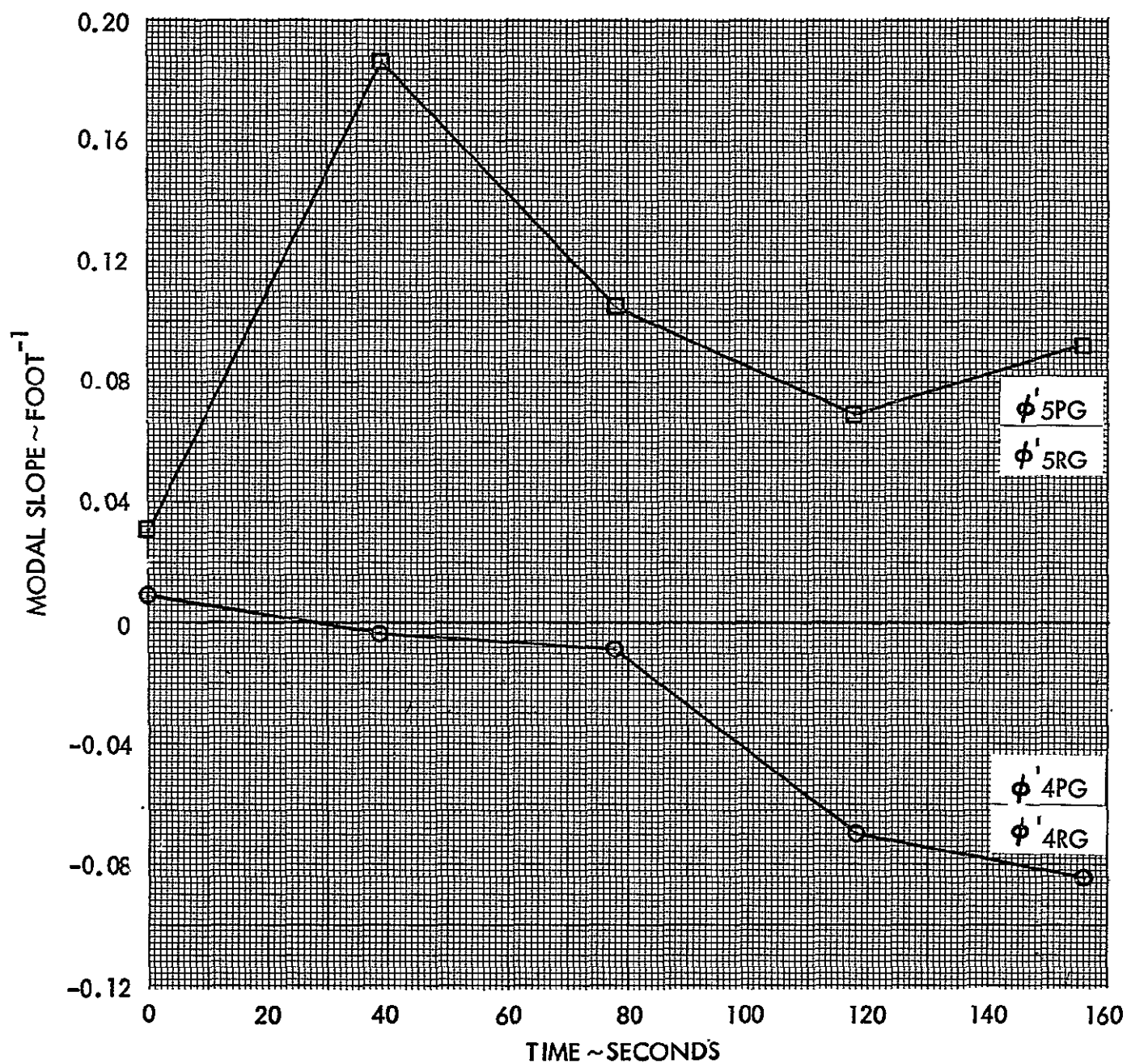
SATURN V/VOYAGER MODAL SLOPES AT THE INSTRUMENT UNIT

 $(\phi'_{1RG}, \phi'_{2RG}, \phi'_{3RG} \text{ AND } \phi'_{1PG}, \phi'_{2PG}, \phi'_{3PG})$ VERSUS TIME

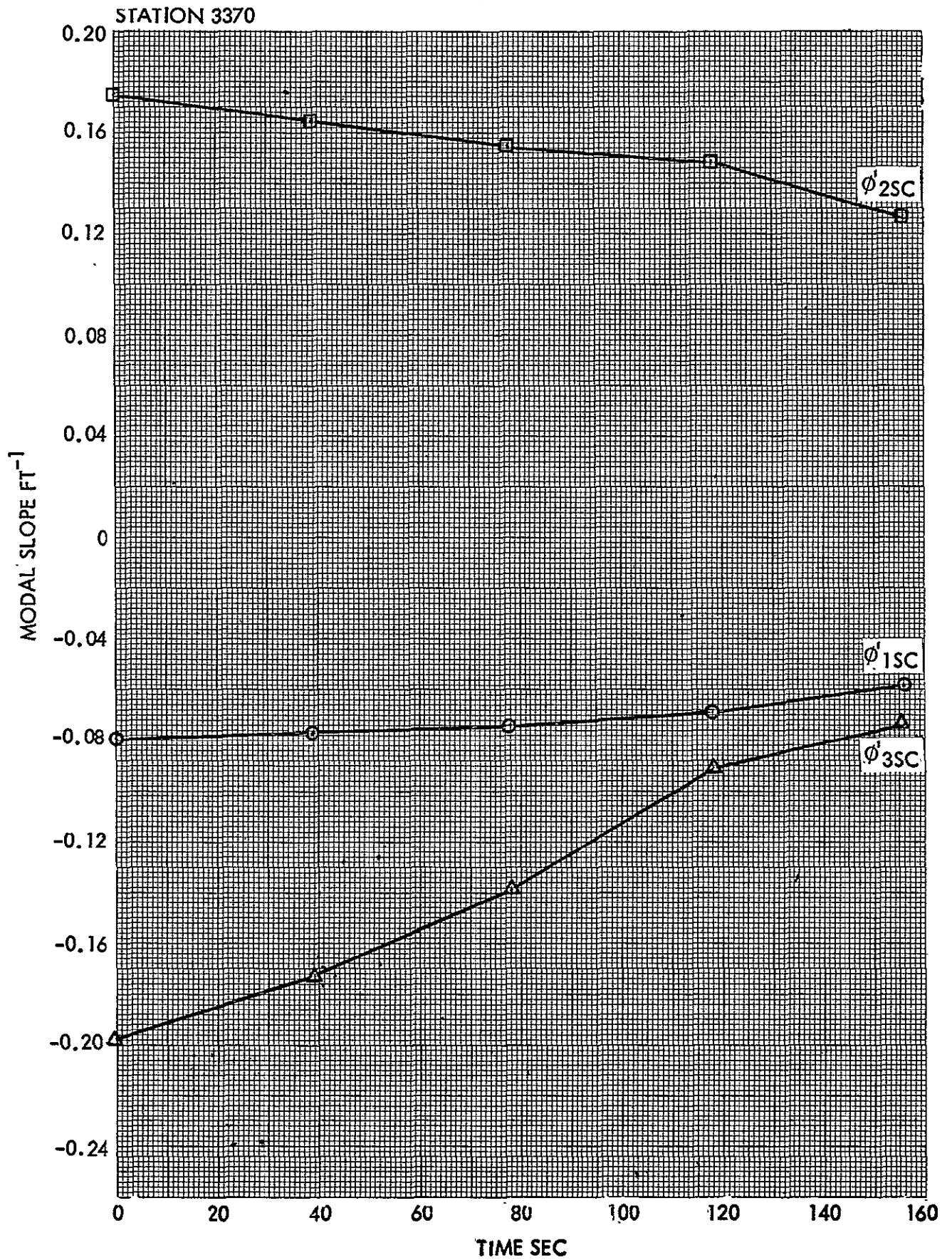
SATURN V/VOYAGER, MODAL SLOPES AT THE INSTRUMENT UNIT

 $(\phi'_{4RG}, \phi'_{5RG} \text{ AND } \phi'_{4PG}, \phi'_{5PG})$ VERSUS TIME

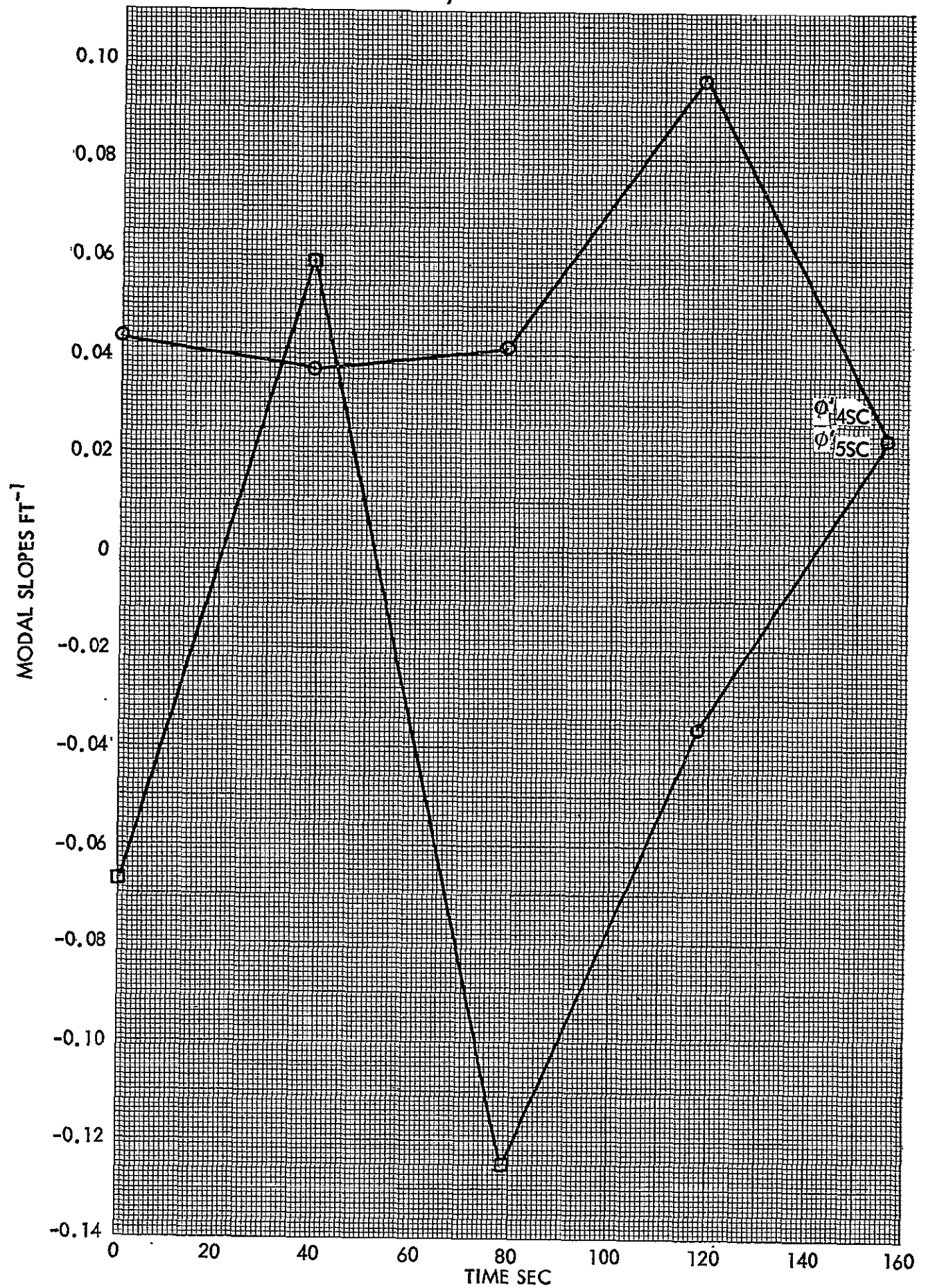
STATION 3222



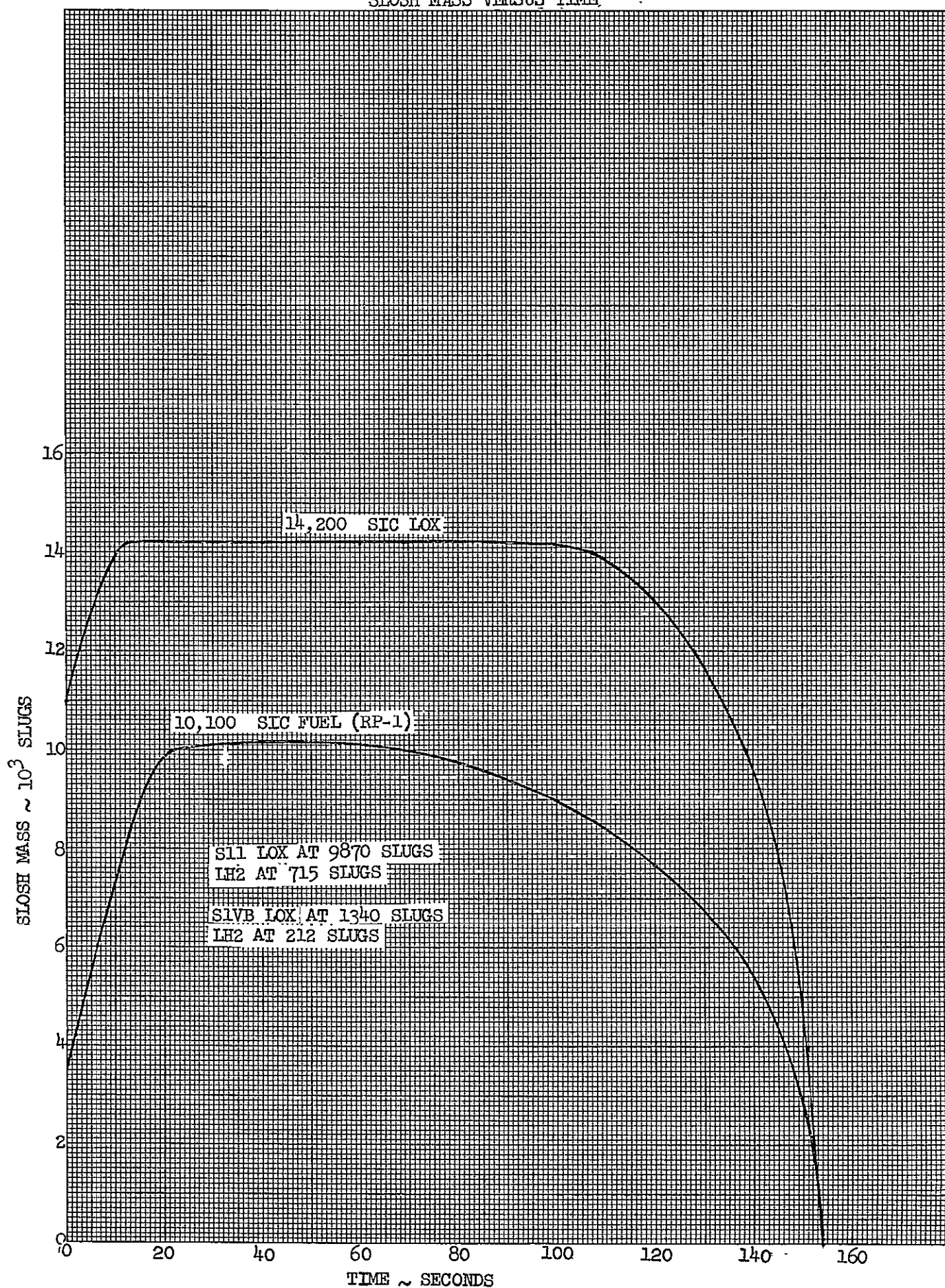
SATURN V/VOYAGER, MODAL SLOPES AT THE SPACECRAFT

 $(\phi'_{1SC}, \phi'_{2SC}, \phi'_{3SC})$ VERSUS TIME

STATION 3370

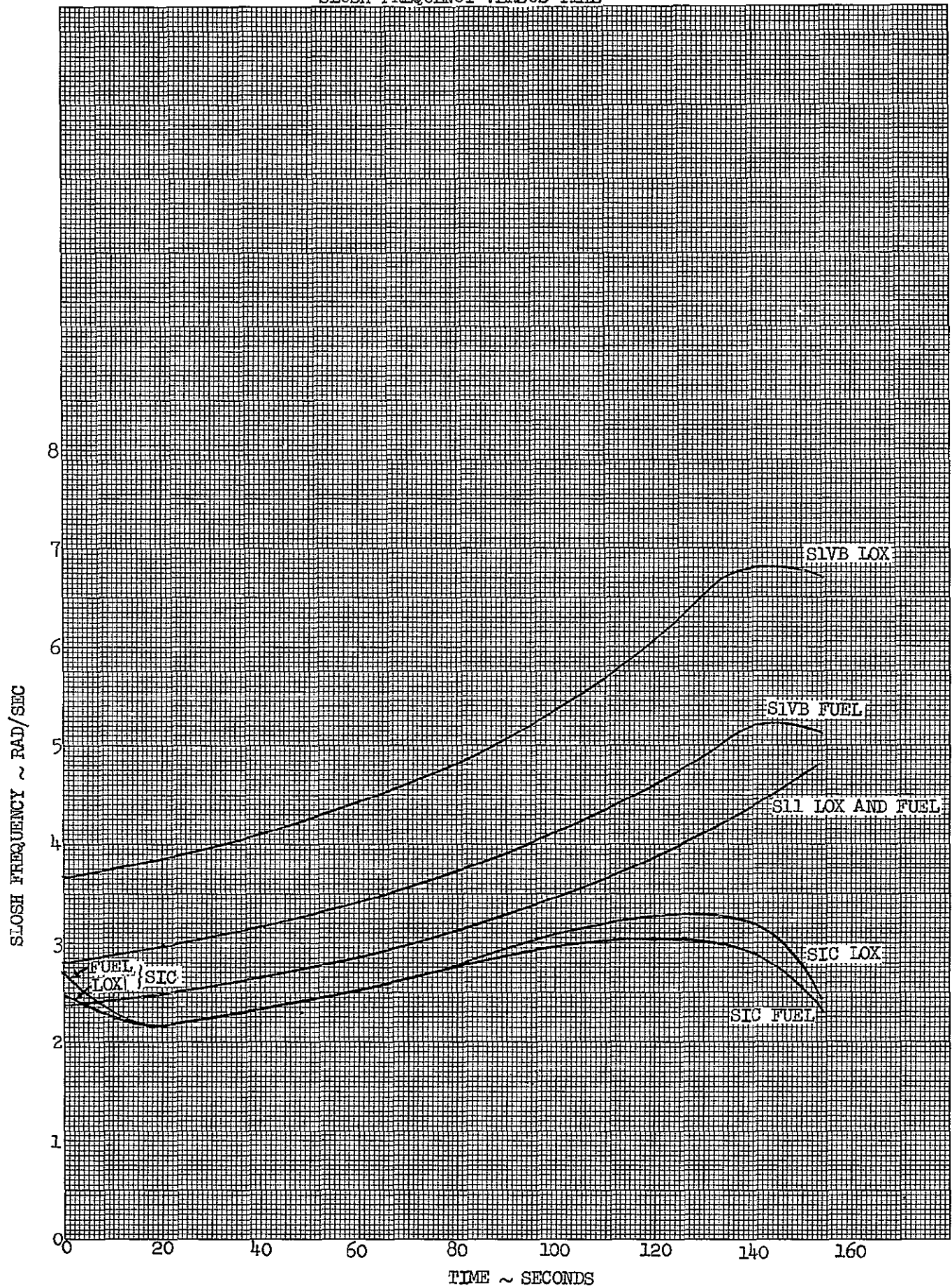
 $(\phi'_{4SC}, \phi'_{5SC})$ VERSUS TIME

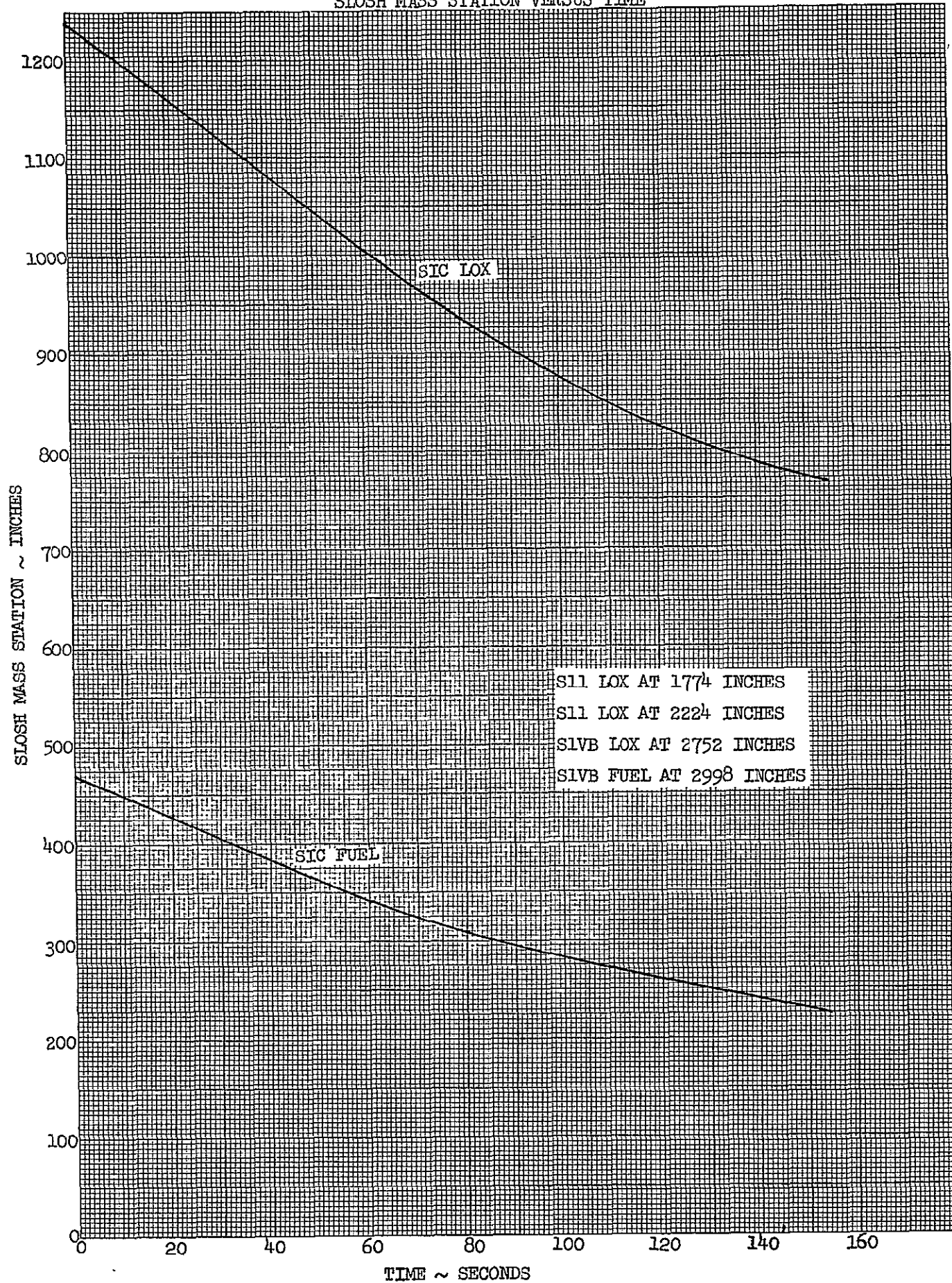
PROPELLANT
SLOSH

SATURN V/VOYAGER.
SLOSH MASS VERSUS TIME

SATURN V/VOYAGER,
SLOSH FREQUENCY VERSUS TIME

478



SATURN V/VOYAGER,
SLOSH MASS STATION VERSUS TIME

3. SATURN V THRUST VECTOR CONTROL SYSTEM DATA

3.1 SATURN V CONTROL COMPUTER FREQUENCY RESPONSE

The Saturn V control computer mixing amplifier has a frequency response as shown in Figure E-5. The linear equation that describes this response is as follows:

$$\frac{I_o}{I_{in.}} = \frac{1666.}{\left[\frac{S^2}{(396)^2} + \frac{1.70}{(396)} S + 1 \right]}$$

$I_{in.}$ = Input current in mA

I_o = Servovalve or output current in mA

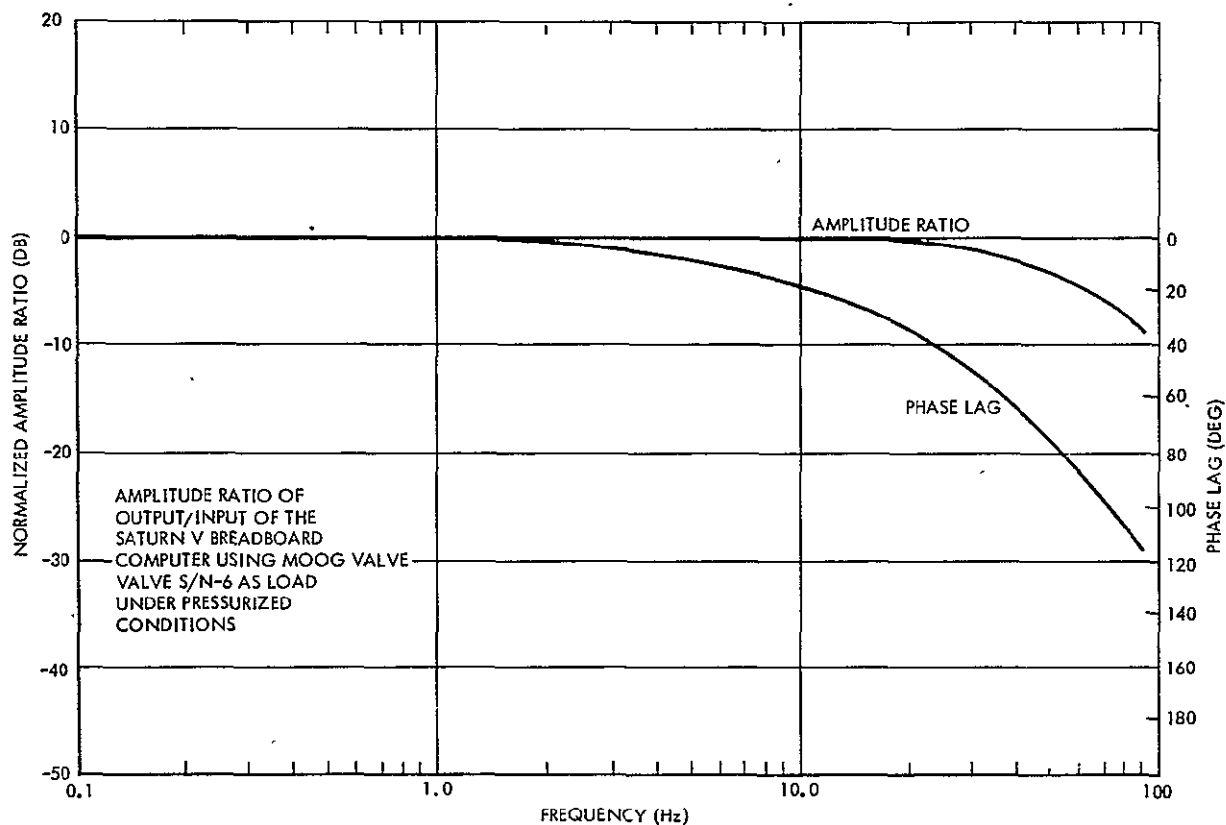


Figure E-5., Saturn V Control Computer Mixing Amplifier Frequency Response

3.2 S-IC STAGE TVC DATA

The linear block diagram for the S-IC stage TVC system is shown in Figure E-6. The nonlinear block diagram and system parameters are shown in Figure E-7 and Table E-1, respectively. The frequency response and time response specifications are shown in Figures E-8, E-9, and E-10.

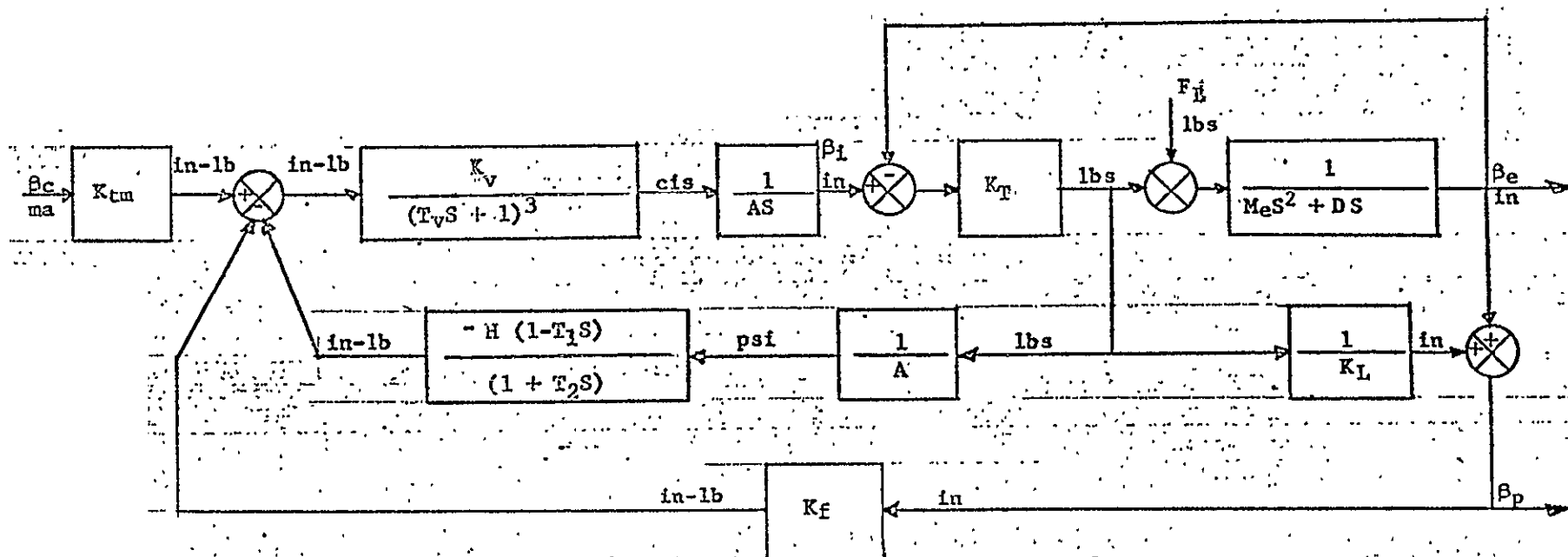
The linear equation describing the S-IC Stage thrust vector control system is as follows:

$$\frac{\beta_e}{\beta_c} = \left\{ \frac{0.1036 (0.25 S + 1)}{\left[\frac{S}{4.023} + 1 \right] \left[\frac{S^2}{(34.48)^2} + \frac{2(0.434)S}{34.48} + 1 \right]} \right\} \\ \times \left\{ \frac{1}{\left[\frac{S^2}{(84.09)^2} + \frac{2(0.594)S}{84.09} + 1 \right] \left[\frac{S^2}{(409.68)^2} + \frac{2(0.946)S}{409.68} + 1 \right]} \right\}$$

where:

β_e is in degrees

β_c is in milliamperes



$$K_{tm} \text{ ----- } 0.04 \text{ in-lb/ma}$$

$$K_v \text{ ----- } 2940 \text{ cis/in-lb}$$

$$T_v \text{ ----- } 3.32 \times 10^{-3} \text{ sec}$$

$$A \text{ ----- } 57 \text{ in}^2$$

$$K_T \text{ ----- } 205,000 \text{ lbs/in}$$

$$K_L \text{ ----- } 239,000 \text{ lbs/in}$$

$$M_e \text{ ----- } 94.5 \text{ lb-sec}^2/\text{in}$$

$$D \text{ ----- } 505 \text{ lb-sec/in}$$

$$H \text{ ----- } 6.03688 \times 10^{-5} \frac{\text{in-lb}}{\text{psi}}$$

$$T_1 \text{ ----- } 0.53 \text{ sec}$$

$$T_2 \text{ ----- } 0.25 \text{ sec}$$

$$K_f \text{ ----- } 0.3479 \text{ in-lb/in}$$

$$\delta_{e \text{ max}} = 5.15 \text{ deg}$$

$$\dot{\delta}_{e \text{ max}} = 7 \text{ deg/sec}$$

$$R_n = 5.31 \text{ ft}$$

$$I_n = 56,760 \text{ slug ft}^2$$

$$\omega_{DWT} = \omega_n = 38 \text{ rad/sec}$$

$$\omega_{TWD} = 24 \text{ rad/sec}$$

Figure E-6. S-IC Stage Thrust Vector Control System
Block Diagram and System Parameters

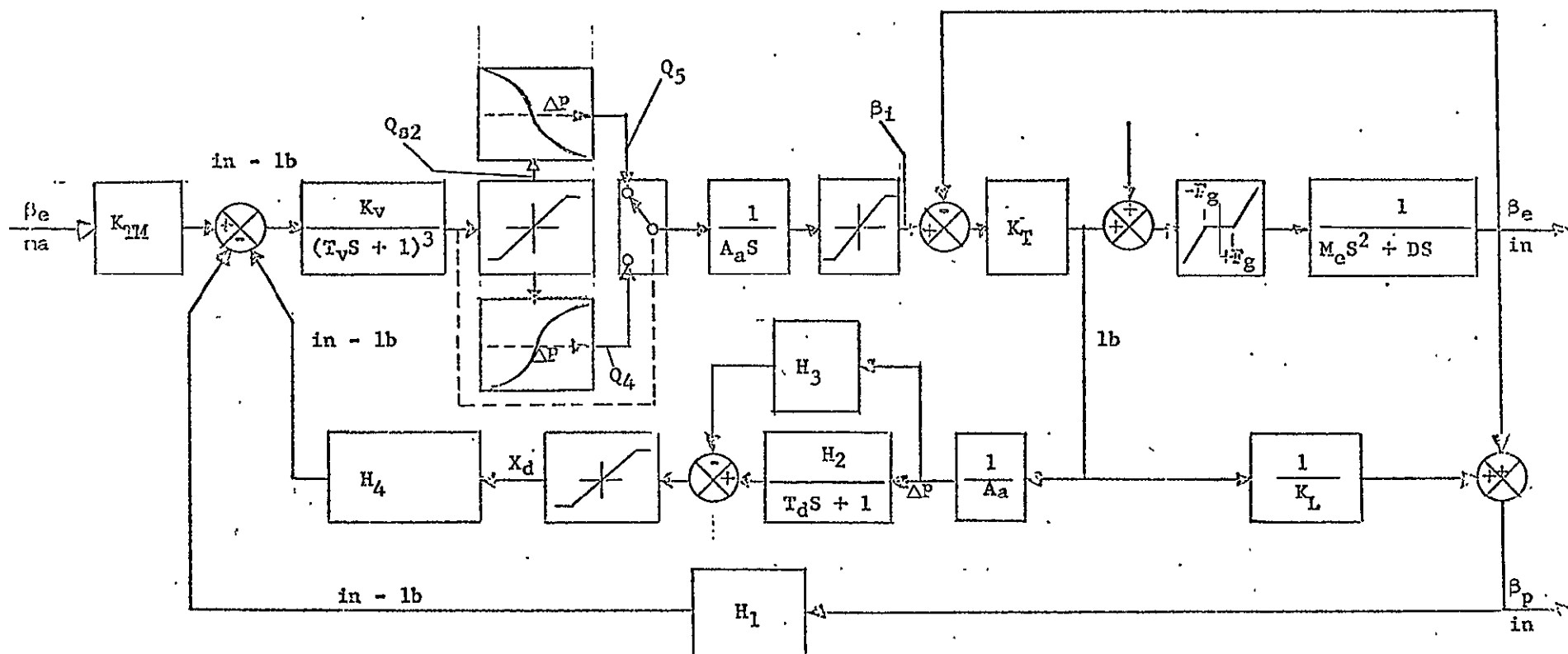


Figure E-7. S-IC Stage Thrust Vector Control System
Nonlinear Block Diagram

Table E-1
S-IC Parameters

K_{TM}	$= 0.04 \frac{\text{in.} \cdot \text{lb}}{\text{ma}}$	$\frac{Q_4}{Q_{s2}} = \frac{-(\Delta P - P_s)}{ \Delta P - P_s } \left \frac{\Delta P}{P_s} - 1 \right ^{1/2}$
K_v	$= 2940 \frac{\text{cis}}{\text{in.} \cdot \text{lb}}$	$\frac{Q_5}{Q_{s2}} = \frac{(\Delta P + P_s)}{ \Delta P - P_s } \left \frac{\Delta P}{P_s} + 1 \right ^{1/2}$
T_v	$= 3.32 \times 10^{-3} \text{ sec}$	
T_d	$= 0.25 \text{ sec}$	
H_1	$= 0.3479 \frac{\text{in.} \cdot \text{lb}}{\text{in.}}$	
H_2	$= 3.69 \times 10^{-5} \frac{\text{in.}}{\text{psi}}$	
H_3	$= 2.51 \times 10^{-5} \frac{\text{in.}}{\text{psi}}$	
H_4	$= 5.116 \frac{\text{in.} \cdot \text{lb}}{\text{in.}}$	
A_a	$= 57 \text{ in.}^2$	
M_e	$= 94.5 \frac{\text{lb} \cdot \text{sec}^2}{\text{in.}}$	
D	$= 505 \frac{\text{lb} \cdot \text{sec}}{\text{in.}}$	
P_S	$= 1800 \text{ psi (nom)}$	
K_{IL}	$= 239,000 \frac{\text{lb}}{\text{in.}}$	
K_T	$= 205,000 \frac{\text{lb}}{\text{in.}}$	
$(X_a)_{\text{max.}}$	$= \pm 0.05 \text{ in.}$	
$(Q_{s2})_{\text{max.}}$	$= \pm 740 \text{ cis}$	
$(\beta_i)_{\text{max.}}$	$= \pm 5.74 \text{ in.}$	
F_g	$= 12,000 \text{ lb}$	
F_L	$= 66,000 + 30,000 \sin(500 t)$	

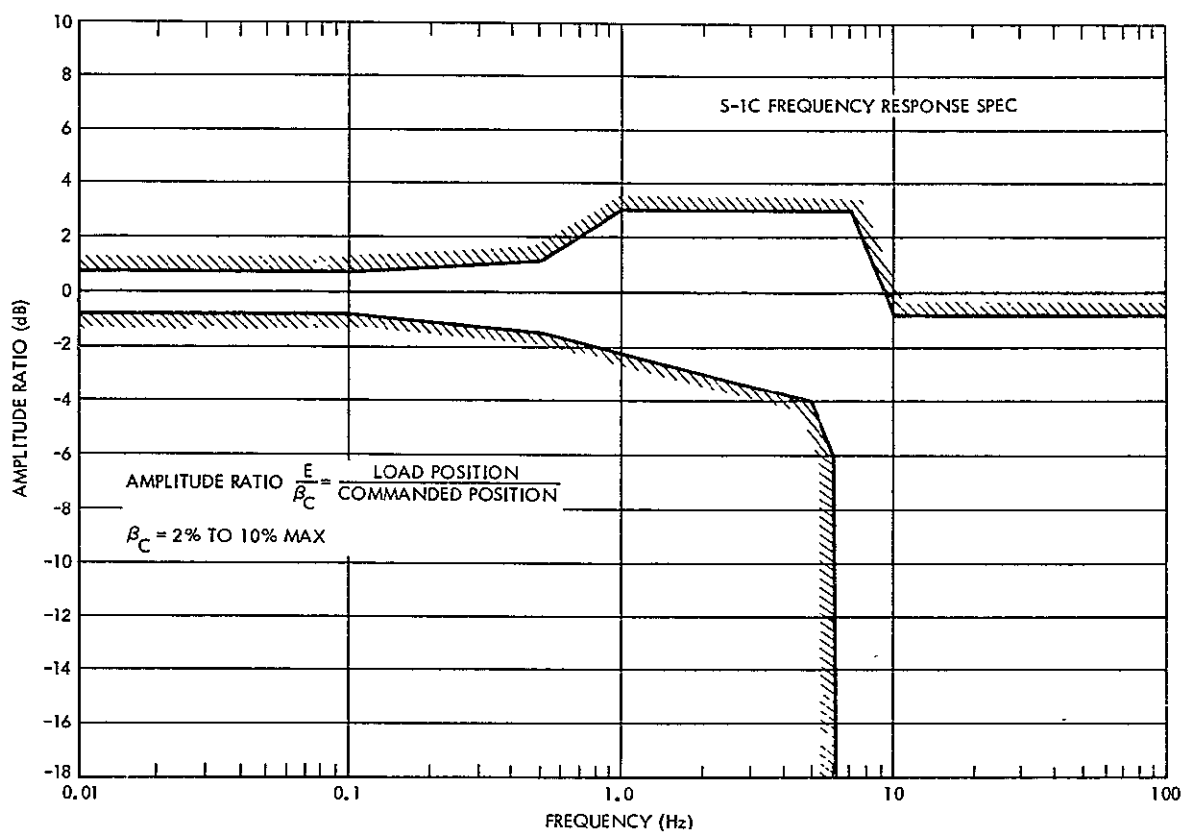


Figure E-8. S-IC Frequency Response Specification. (amplitude ratio)

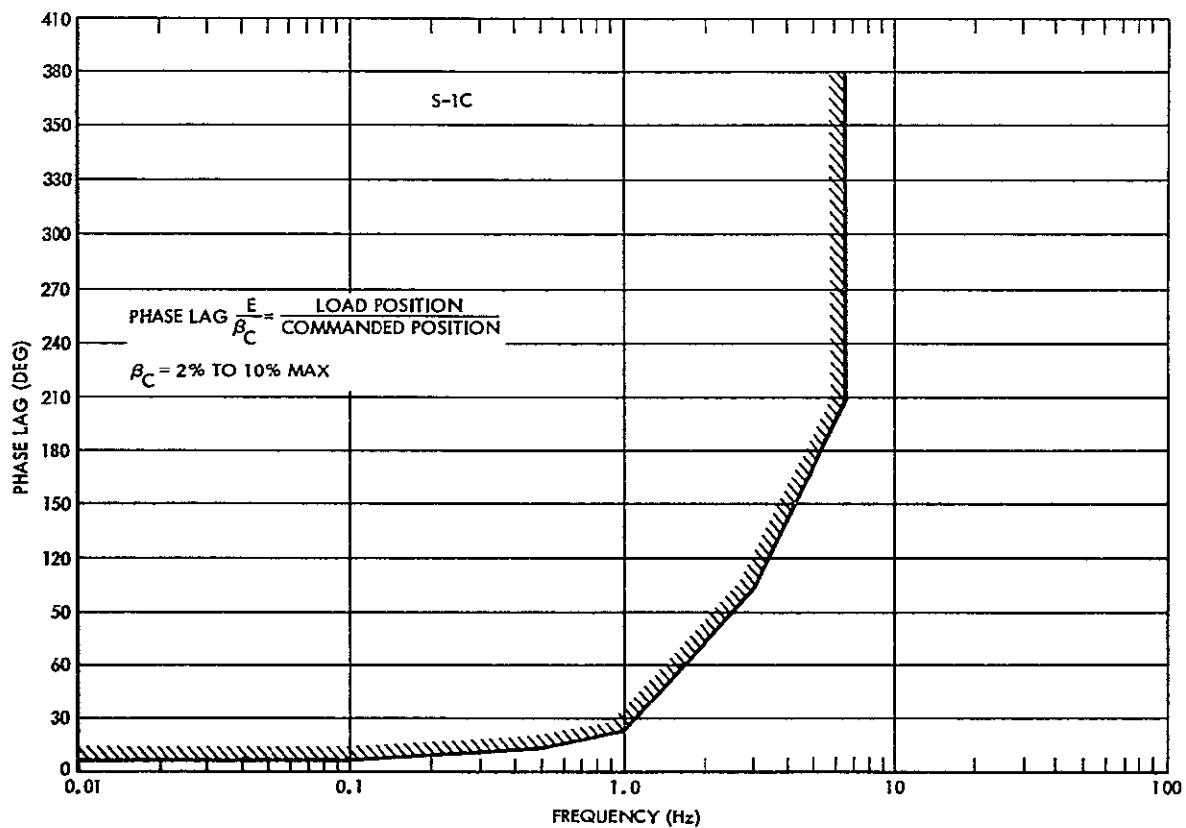


Figure E-9. S-IC Frequency Response Specification (phase lag)

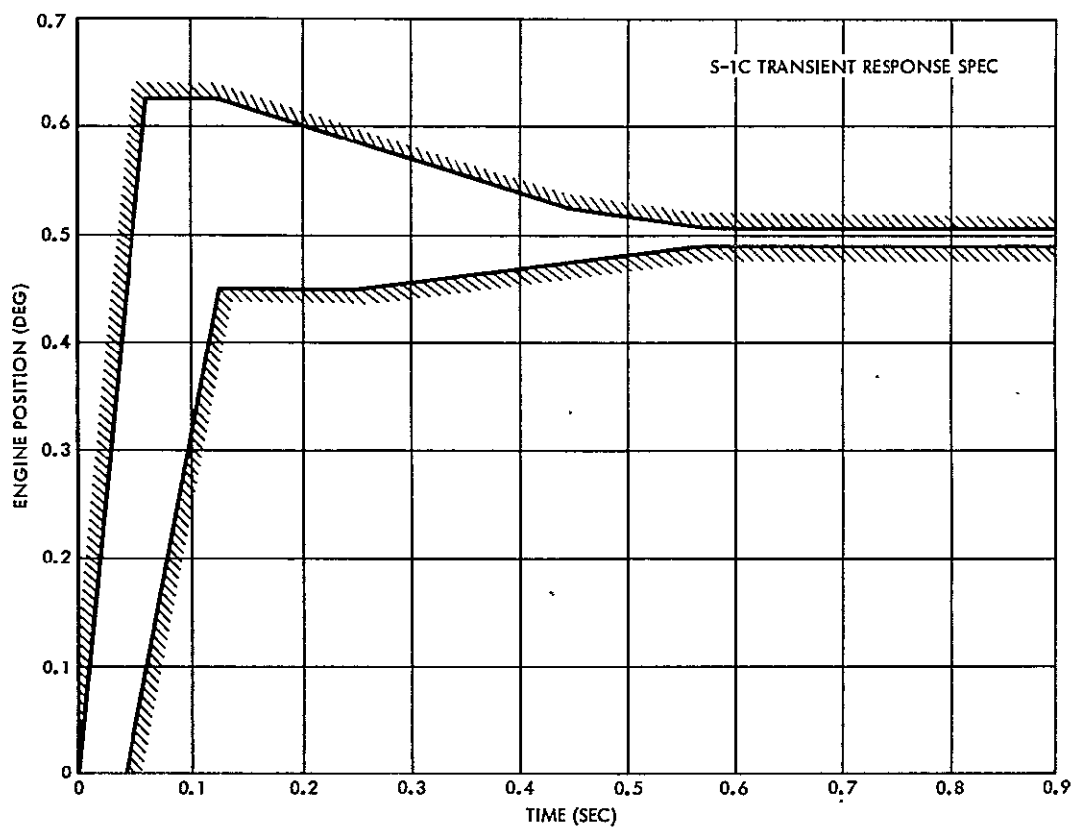


Figure E-10. S-IC Time Response Specification

3.3 S-II STAGE TVC DATA

The linear block diagram for the S-II Stage TVC system is shown in Figure E-11. The nonlinear block diagram and system parameters are shown in Figure E-12 and Table E-2, respectively. The frequency response specification is shown in Figure E-13.

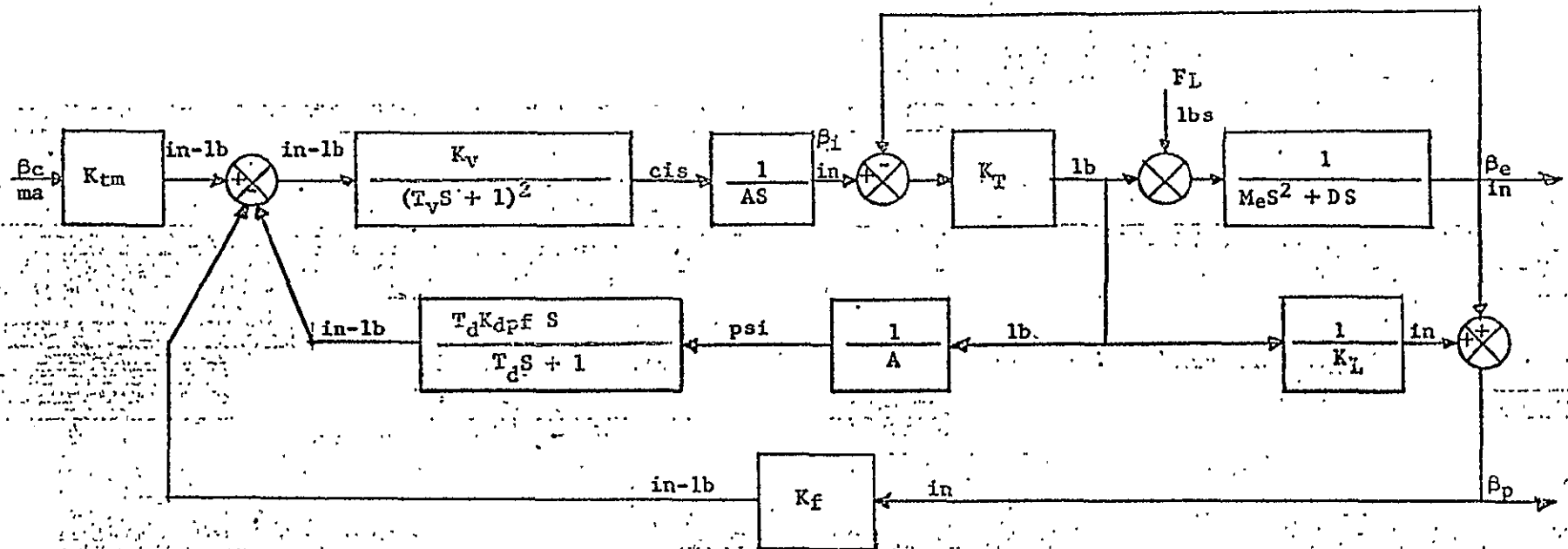
The linear equation describing the S-II Stage thrust vector control system is as follows:

$$\frac{\beta_e}{\beta_c} = \left\{ \frac{0.159 [0.08 S + 1]}{\left[\frac{S}{11.02} + 1 \right] \left[\frac{S}{421} + 1 \right] \left[\frac{S^2}{(33.73)^2} + \frac{2(0.399)S}{33.73} + 1 \right]} \right\} \\ \times \left\{ \frac{1}{\left[\frac{S^2}{(94.22)^2} + \frac{2(0.987)S}{94.22} + 1 \right]} \right\}$$

where:

β_e is in degrees

β_c is in milliamperes



$$K_{tm} \text{ ----- } 0.035 \text{ in - lb/ma}$$

$$K_v \text{ ----- } 220 \text{ cis/in - lb}$$

$$T_v \text{ ----- } 3.18 \times 10^{-3} \text{ sec}$$

$$A \text{ ----- } 13 \text{ in}^2$$

$$K_T \text{ ----- } 260,000 \text{ lb/in}$$

$$K_L \text{ ----- } 312,000 \text{ lb/in}$$

$$M_e \text{ ----- } 125 \text{ lb - sec}^2/\text{in}$$

$$D \text{ ----- } 625 \text{ lb - sec/in}$$

$$T_d \text{ ----- } 0.08 \text{ sec}$$

$$K_{dpf} \text{ ----- } 10 \times 10^{-5} \text{ in - lb/psi}$$

$$K_f \text{ ----- } 1.06 \text{ in - lb/in}$$

$$\delta e_{\max} = 7 \text{ deg}$$

$$\dot{\delta} e_{\max} = 9.6 \text{ deg/sec}$$

$$R_n = 0.991 \text{ ft}$$

$$I_n = 2690 \text{ slug ft}^2$$

$$\omega_{DWT} = \omega_n = 34 \text{ rad/sec}$$

$$\omega_{TWD} = 24 \text{ rad/sec}$$

Figure E-11. S-II Linear Thrust Vector Control System
Block Diagram and System Parameters

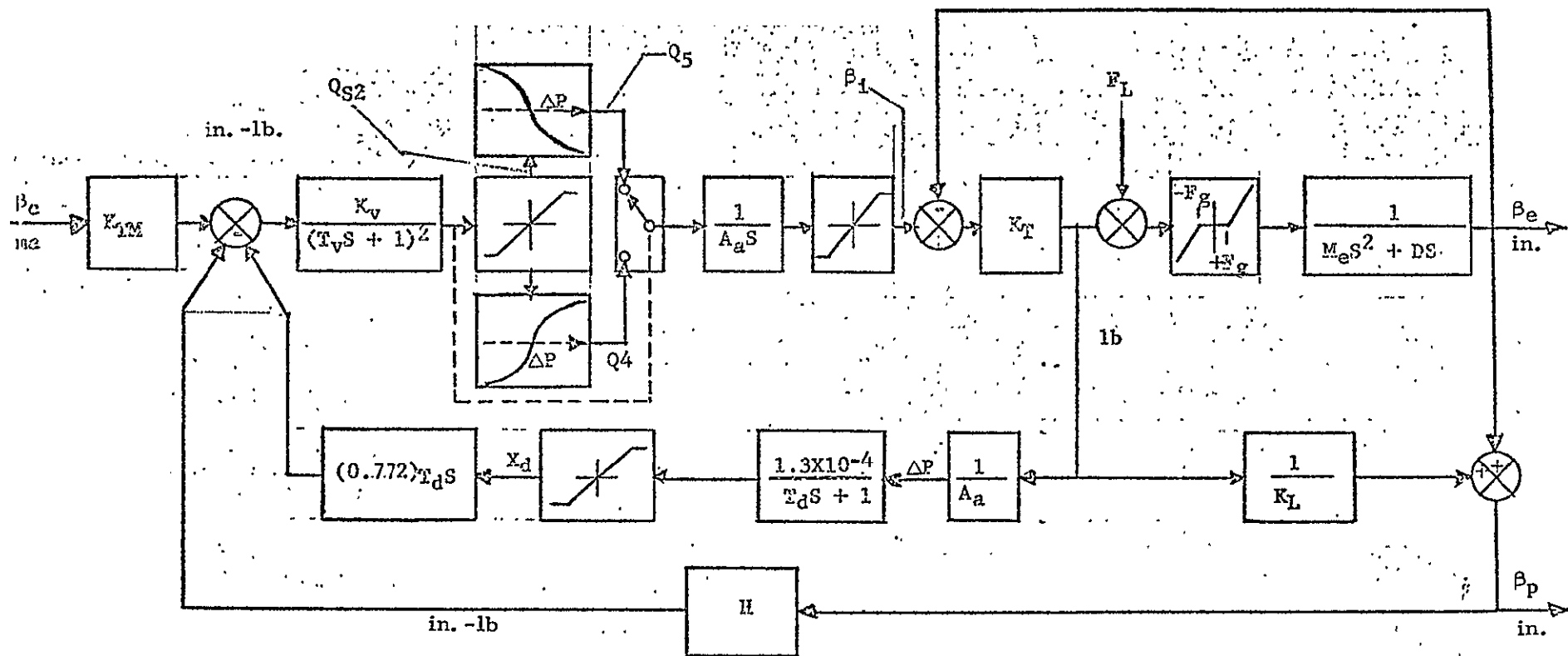


Figure E-12. S-II Thrust Vector Control System
Nonlinear Block Diagram

Table E-2
S-II TVC System Block Diagram Parameters

K_{TM}	$= 0.035 \frac{\text{in.} \cdot \text{lb}}{\text{mA}}$
K_v	$= 220 \frac{\text{cis}}{\text{in.} \cdot \text{lb}}$
T_v	$= 3.18 \times 10^{-3} \text{ sec}$
T_d	$= 8 \times 10^{-2} \text{ sec}$
H	$= 1.06 \frac{\text{in.} \cdot \text{lb}}{\text{in.}}$
A_a	$= 13 \text{ in.}^2$
M_e	$= 125 \frac{\text{lb} \cdot \text{sec}^2}{\text{in.}}$
D	$= 625 \frac{\text{lb} \cdot \text{sec}}{\text{in.}}$
P_s	$= 3500 \text{ psi (nom)}$
K_L	$= 312,000 \text{ lb/in.}$
K_T	$= 260,000 \text{ lb/in.}$
$(X_d) \text{ max.}$	$= \pm 0.26 \text{ in.}$
$(Q_{s2}) \text{ max.}$	$= \pm 71 \text{ cis}$
$(\beta_1) \text{ max.}$	$= \pm 1.51 \text{ in.}$
F_g	$= 9000 \text{ lb}$
F_L	$= 20,000 + 40,000 \sin(500 t)$

$$\frac{Q_5}{Q_{s2}} + \frac{(\Delta P + P_s)}{|\Delta P + P_s|} \left| \frac{\Delta P}{P_s} + 1 \right|^{1/2}$$

$$\frac{Q_4}{Q_{s2}} = \frac{-(\Delta P - P_s)}{|\Delta P - P_s|} \left| \frac{\Delta P}{P_s} - 1 \right|^{1/2}$$

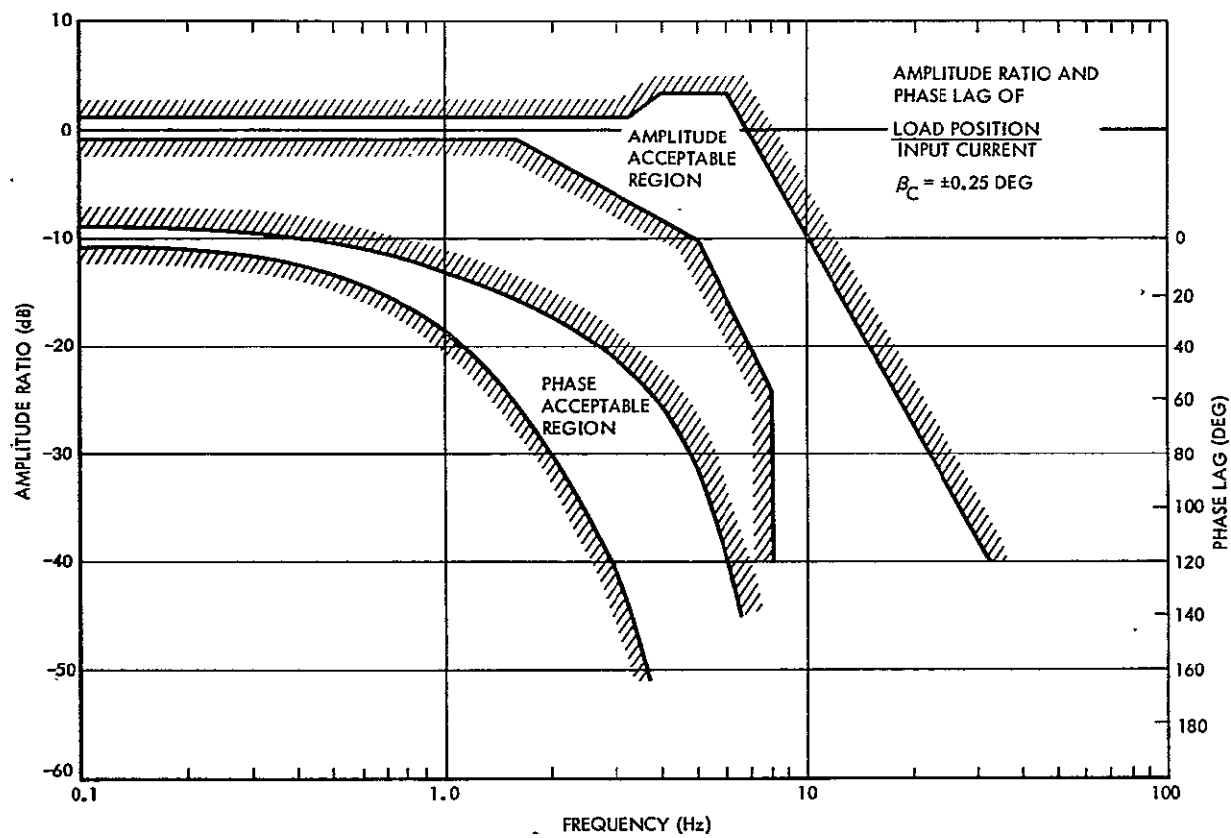


Figure E-13. S-II Frequency Response Specification

3.4 S-IVB STAGE TVC DATA

The linear block diagram for the S-IVB Stage TVC system is shown in Figure E-14. The nonlinear block diagram and system parameters are shown in Figure E-15 and Table E-3, respectively. The frequency response specification is shown in Figure E-16.

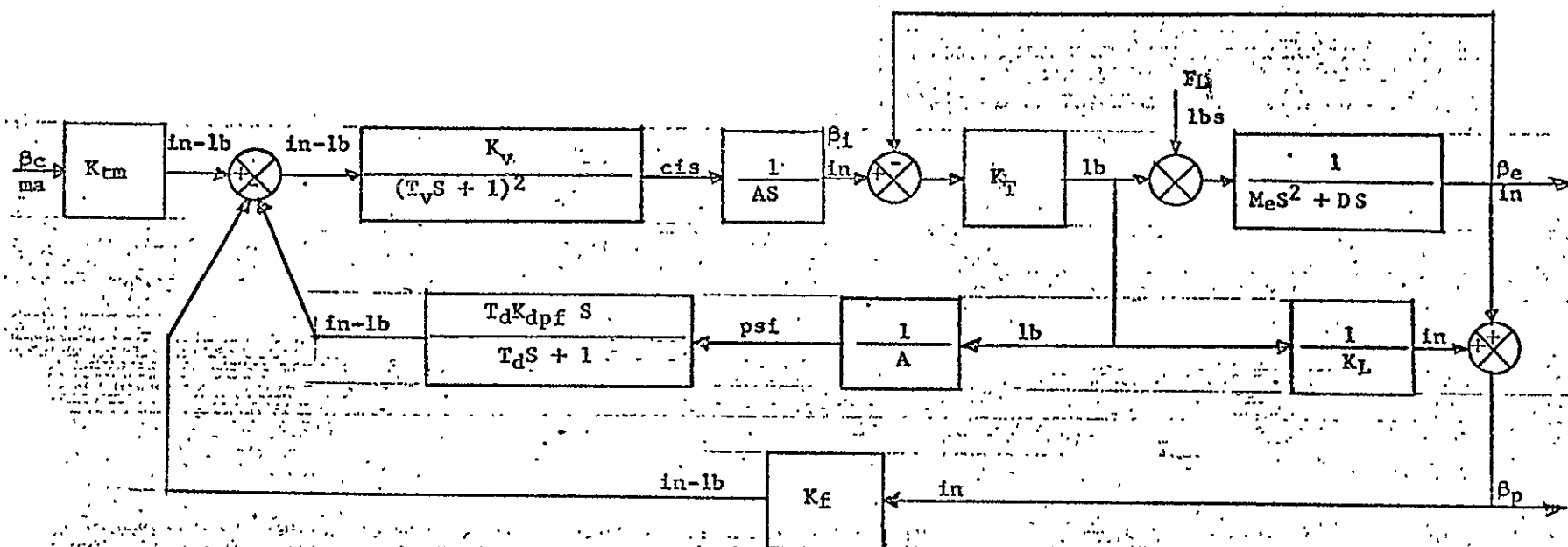
The linear equation describing the S-IVB Stage thrust vector control system is as follows:

$$\frac{\beta_e}{\beta_c} = \left\{ \frac{0.1496 [0.08 S + 1]}{\left[\frac{S}{32.257} + 1 \right] \left[\frac{S}{10.49} + 1 \right] \left[\frac{S}{405} + 1 \right]} \right\} \times \left\{ \frac{1}{\left[\frac{S}{174} + 1 \right] \left[\frac{S^2}{(34.68)^2} + \frac{2(0.327)}{(34.68)} S + 1 \right]} \right\}$$

where:

β_e is in degrees

β_c is in milliamperes



K_{tm} ----- 0.035 in - lb/ma

K_v ----- 149.5 cis/in - lb

T_v ----- 3.18×10^{-3}

A ----- 11.78 in^2

K_T ----- 233,000 lb/in

K_L ----- 284,000 lb/in

M_e ----- 125 lb-sec²/in

D ----- 538. lb-sec/in

T_d ----- 0.08 sec.

K_{dpf} ----- 10×10^{-5} in-lb/psi

K_f ----- 1.129 in-lb/in

$R_n = 0.966 \text{ ft}$

$I_n = 2660 \text{ slug ft}^2$

$\omega_{DWT} = \omega_n = 31 \text{ rad/sec}$

$\omega_{TWD} = 24 \text{ rad/sec}$

Figure E-14. S-IVB Linear Thrust Vector Control System Block Diagram and System Parameters

Table E-3
S-IVB TVC System Block Diagram Parameters

K_{TM}	$= 0.035 \frac{\text{in.} \cdot \text{lb}}{\text{mA}}$
K_v	$= 149.5 \frac{\text{cis}}{\text{in.} \cdot \text{lb}}$
T_v	$= 3.18 \times 10^{-3} \text{ sec}$
T_d	$= 8 \times 10^{-2} \text{ sec}$
H	$= 1.129 \frac{\text{in.} \cdot \text{lb}}{\text{in.}}$
A_a	$= 11.78 \text{ in.}^2$
M_e	$= 125.1 \frac{\text{lb} \cdot \text{sec}^2}{\text{in.}}$
D	$= 538 \frac{\text{lb} \cdot \text{sec}}{\text{in.}}$
P_s	$= 3650 \text{ psi (nom)}$
K_L	$= 284,000 \text{ lb/in.}$
K_T	$= 233,000 \text{ lb/in.}$
$(X_d) \text{ max.}$	$= \pm 0.26 \text{ in.}$
$(Q_{s2}) \text{ max.}$	$= \pm 40.4 \text{ cis}$
$(\beta_1) \text{ max.}$	$= \pm 1.45 \text{ in.}$
F_g	$= 9000 \text{ lb}$
F_L	$= 15,000 + 30,000 \sin(500 t)$
$\frac{Q_5}{Q_{s2}}$	$= \frac{(\Delta P + P_s)}{ \Delta P + P_s } \left \frac{\Delta P}{P_s} + 1 \right ^{1/2}$
$\frac{Q_4}{Q_{s2}}$	$= \frac{-(\Delta P - P_s)}{ \Delta P - P_s } \left \frac{\Delta P}{P_s} - 1 \right ^{1/2}$

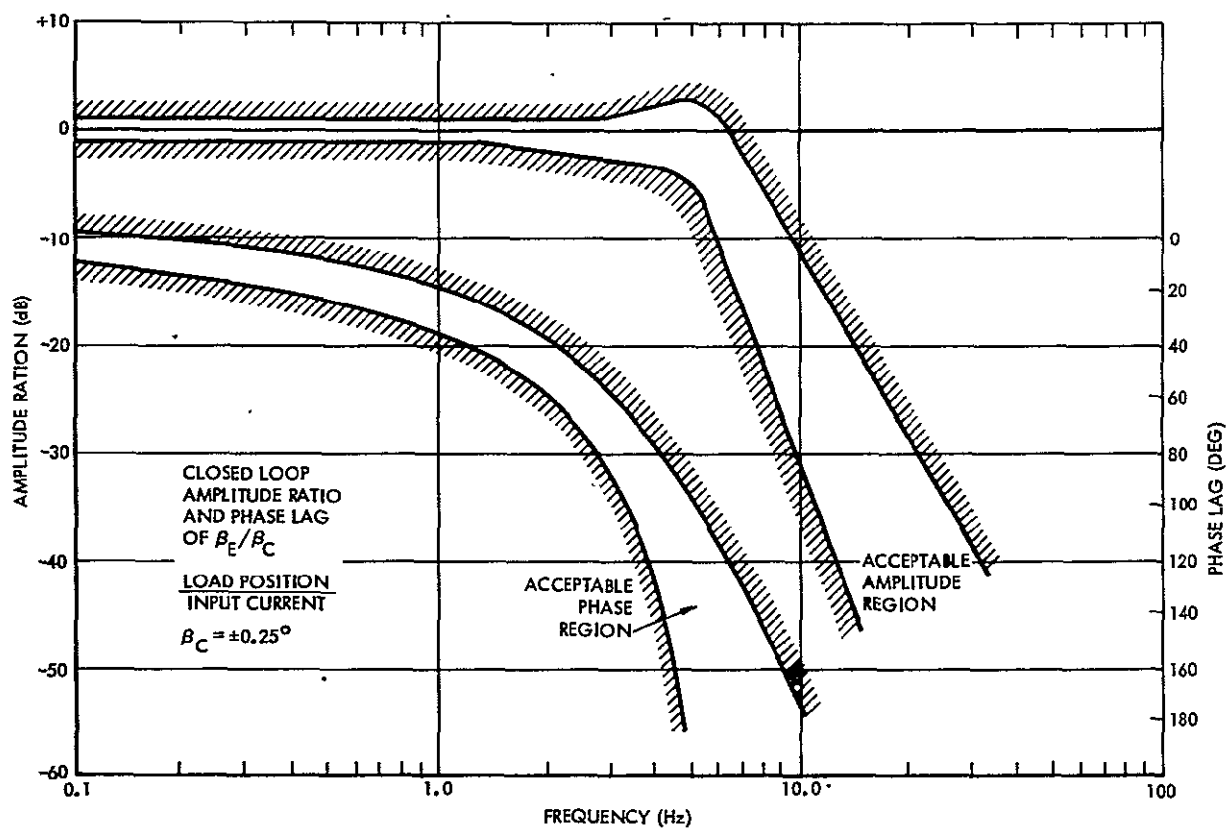


Figure E-16.1 S-IVB Frequency Response Specification

SATURN V/VOYAGER

BENDING MODE DATA

<u>PARAMETER</u>	<u>PRINTOUT</u>
Bending Mode Frequency	OMEGA (rad/sec)
Bending Modal Mass	TOTAL MASS ($\frac{1}{12}$ slugs)
Bending Mode Deflection	Y/Q EQ PHI (non-dimensional)
Bending Mode Slope	PHI PR (inch ⁻¹)

PRIMARY STATIONS

Engine Gimbal	100 inches
Saturn Instrument Unit	3222 inches
Spacecraft Sensors	3370 inches

SATURN V/VOYAGER

06/03/68

VOYAGER STAGE 1 MODES

MODE 1

LIFTOFF

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.75299710 01	.56700463 02	.16175824 05	.16175824 05	.16175824 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.11550000 03	.00000000 00	.00000000 00	-.22317485-02	.21544475 01	-.22317485-02
.00000000 00	.31638894 06	.58127238 04	-.22316393-02	.18963779 01	-.22372554-02
.10000000 03	.13841738 07	.20963865 05	-.22309509-02	.16722087 01	-.22512058-02
.23500000 03	.57575748 07	.37936979 05	-.22266399-02	.13670336 01	-.22632940-02
.36000000 03	.13605157 08	.97341741 05	-.22133526-02	.10796652 01	-.23478489-02
.60000000 03	.51675759 08	.20646423 06	-.20941037-02	.49543104 00	-.24989355-02
.77500000 03	.89779010 08	.21984128 06	-.18610263-02	.72802542-01	-.22920876-02
.91000000 03	.11921362 09	.21159310 06	-.15946484-02	-.21901574 00	-.20095368-02
.11600000 04	.16293578 09	.12480561 06	-.11392586-02	-.62246425 00	-.13148644-02
.14000000 04	.17647837 09	-.19139800 05	-.54214648-03	-.84647516 00	-.51152280-03
.15410000 04	.17253509 09	-.29371734 05	-.49887325-04	-.87986600 00	.11303786-04
.16200000 04	.17015371 09	-.31175012 05	.20080053-03	-.86925784 00	.26133453-03
.16800000 04	.16822125 09	-.33482199 05	.38879896-03	-.84780679 00	.45381294-03
.17900000 04	.16394775 09	-.53272222 05	.71439798-03	-.77864379 00	.80245124-03
.19100000 04	.15370887 09	-.11619168 06	.10658942-02	-.65216874 00	.13330015-02
.19800000 04	.14517643 09	-.12363831 06	.12958537-02	-.54981601 00	.15800797-02
.23900000 04	.93278284 08	-.12652891 06	.23711455-02	.33724062 00	.26620165-02
.24700000 04	.83222920 08	-.12467030 06	-.26104355-02	.57043770 00	.30478752-02
.25190000 04	.77120972 08	-.12437727 06	.27436005-02	.72306331 00	.31800119-02
.26460000 04	.61389399 08	-.12327952 06	.31180427-02	.11546344 01	.36376953-02
.28100000 04	.42318879 08	-.93895212 05	.38647118-02	.18134106 01	.43341878-02
.28900000 04	.35956591 08	-.70855251 05	.41902215-02	.21665050 01	.45197807-02
.32225000 04	.16117557 08	-.46160009 05	.52254304-02	.38449794 01	.56007150-02
.32585000 04	.14495695 08	-.43922832 05	.54457491-02	.40635130 01	.61429369-02
.33700000 04	.97155957 07	-.39756435 05	.59841580-02	.47785966 01	.66152124-02
.35580000 04	.38357747 07	-.25654643 05	.64750431-02	.60499572 01	.68822596-02
.36700000 04	.13159946 07	-.16403772 05	.65862735-02	.68224559 01	.68466508-02
.37785000 04	.31235816 06	-.18493626 04	.66158974-02	.75549980 01	.66452524-02
.41135000 04	.14254592 04	-.14221723 03	.66711122-02	.98107792 01	.68568297-02
.41340000 04	-.10273206-05	.98781293-04	.66715813-02	.99505849 01	.66714825-02

06/03/68

VOYAGER STAGE 1 MODES

MODE 2

LIFTOFF

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
.14823875 02	.21974728 03	.16175824 05	.16175824 05	.16175824 05	.00000000 00	
STATION IN	M/Q LB IN/IN	V/Q	LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.23736871-02	.19249371 01	-.23736871-02	
.00000000 00	.10860485 07	.19860387 05	-.23733114-02	.16497374 01	-.23925002-02	
.10000000 03	.46911219 07	.69889434 05	-.23709643-02	.14090135 01	-.24384903-02	
.23500000 03	.19119637 08	.12420410 06	-.23565682-02	.10757590 01	-.24765721-02	
.36000000 03	.43736277 08	.29468490 06	-.23131383-02	.75301986 00	-.27203022-02	
.60000000 03	.14825154 09	.51396468 06	-.19555833-02	.56604937-01	-.29633572-02	
.77500000 03	.23782065 09	.50953524 06	-.13179234-02	-.40976372 00	-.23170120-02	
.91000000 03	.29951956 09	.35162128 06	-.62899553-03	-.66394101 00	-.13184490-02	
.11600000 04	.31724412 09	-.21602294 06	.38926993-03	-.71921304 00	.69322181-03	
.14000000 04	.20937833 09	-.63628279 06	.13246934-02	-.34505414 00	.23427459-02	
.15410000 04	.11789352 09	-.64983758 06	.17863133-02	.67899121-01	.31401416-02	
.16200000 04	.66600310 08	-.64817551 06	.19212523-02	.31444028 00	.31798455-02	
.16800000 04	.27816565 08	-.64379023 06	.19736828-02	.50681207 00	.32237609-02	
.17900000 04	-.40987623 08	-.57055530 06	.19615748-02	.85288899 00	.29046415-02	
.19100000 04	-.89990285 08	-.22520588 06	.18047966-02	.11754808 01	.23225113-02	
.19800000 04	-.10283879 09	-.16945246 06	.16561002-02	.13262631 01	.20456461-02	
.23900000 04	-.14728748 09	-.40083738 05	.48908702-03	.18819833 01	.58123354-03	
.24700 00 04	-.14930535 09	-.98805919 04	.86381643-04	.19116554 01	.12105039-03	
.25190000 04	-.14970715 09	-.65195514 04	-.16197355-03	.19112159 01	-.13909793-03	
.26460000 04	-.14998626 09	.20733548 04	-.98049033-03	.18439717 01	-.98923000-03	
.28100000 04	-.14480365 09	.11495421 06	-.31878364-02	.14983295 01	-.37626075-02	
.28900000 04	-.13230891 09	.17823305 06	-.43472617-02	.11360451 01	-.51762525-02	
.32225000 04	-.70672818 08	.17930448 06	-.85445876-02	-.13460286 01	-.10002348-01	
.32585000 04	-.64276548 08	.17588703 06	-.95160751-02	-.17754299 01	-.12307933-01	
.33700000 04	-.44930547 08	.16576552 06	-.11947811-01	-.32871651 01	-.14579010-01	
.35580000 04	-.18725512 08	.12024912 06	-.14279766-01	-.61992243 01	-.16188482-01	
.36700000 04	-.67763938 07	.79811013 05	-.14832915-01	-.80242628 01	-.16099756-01	
.37785000 04	-.17765196 07	.10131823 05	-.14991169-01	-.97235409 01	-.15151992-01	
.41135000 04	-.84763306 04	.84458324 03	-.15312421-01	-.14974352 02	-.16415338-01	
.41340000 04	.14686104-04	.21357238-02	-.15315254-01	-.15306386 02	-.15317390-01	

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VOYAGER STAGE 1 MODES

MODE 3

LIFTOFF

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.22076297 02	.48736289 03	.16175824 05	.16175824 05	.16175824 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.21412769-02	.15325682 01	-.21412769-02
.00000000 00	.19036085 07	.34671512 05	-.21406172-02	.12834299 01	-.21741162-02
.10000000 03	.81308527 07	.11933080 06	-.21365271-02	.10635095 01	-.22518226-02
.23500000 03	.32520264 08	.20834084 06	-.21119112-02	.75282790 00	-.23132067-02
.36000000 03	.71959603 08	.45275563 06	-.21392053-02	.44403988 00	-.26647744-02
.60000000 03	.21218605 09	.58212498 06	-.14967878-02	-.22592893 00	-.26382093-02
.77500000 03	.30248527 09	.49793430 06	-.64383901-03	-.59459321 00	-.16201808-02
.91000000 03	.35021445 09	.82078809 05	.19969948-03	-.71955655 00	.38760636-04
.11600000 04	.22847666 09	-.95400552 06	.11846902-02	-.37589339 00	.25270096-02
.14000000 04	-.29484807 08	-.99271008 06	.15216501-02	.35305976 00	.31099863-02
.15410000 04	-.16449166 09	-.94946293 06	.12474279-02	.83401100 00	.32254756-02
.16200000 04	-.23894512 09	-.93230555 06	.95215919-03	.10661805 01	.27624612-02
.16800000 04	-.29418942 09	-.90563531 06	.65583088-03	.12219977 01	.24143460-02
.17900000 04	-.38530293 09	-.61069119 06	-.11597497-04	.14288123 01	.99780942-03
.19100000 04	-.39416636 09	.46833004 06	-.89770654-03	.13858093 01	-.19743273-02
.19800000 04	-.35405236 09	.60552464 06	-.14741429-02	.12102153 01	-.28661536-02
.23900000 04	-.80445849 08	.67867751 06	-.34550752-02	-.51412696 00	-.50152534-02
.24700000 04	-.27077596 08	.65243516 06	-.36003964-02	-.97636896 00	-.58896425-02
.25190000 04	.47892922 07	.64806665 06	-.36188773-02	-.12652709 01	-.58927954-02
.26460000 04	.86120317 08	.63145526 06	-.33515254-02	-.20261975 01	-.60132597-02
.28100000 04	.17313300 09	.21581866 06	-.12633234-02	-.28521304 01	-.23424166-02
.28900000 04	.17544511 09	-.79165909 05	.20536313-03	-.29049303 01	.57357666-03
.32225000 04	.11762339 09	-.25232699 06	.65645213-02	-.14955790 01	.86159603-02
.32585000 04	.10842043 09	-.25861223 06	.81923072-02	-.10799023 01	.12297263-01
.33700000 04	.79537867 08	-.25795583 06	.12383775-01	.53764045 00	.16478312-01
.35580000 04	.35107277 08	-.21599929 06	.16634184-01	.40228863 01	.20062744-01
.36700000 04	.13369816 08	-.14913692 06	.17690429-01	.62992943 01	.20057681-01
.37785000 04	.38071142 07	-.21070954 05	.18012909-01	.83917320 01	.18347369-01
.41135000 04	.18814487 05	-.18727450 04	.18713817-01	.14923843 02	.21159382-01
.41340000 04	.46770270-04	-.17317789-02	.18720183-01	.15347724 02	.18721915-01

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VOYAGER STAGE 1 MODES

MODE 4

LIFTOFF

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.35155422 02	.12359037 04	.16175824 05	.16175824 05	.16175824 05	.00000000 00
STATION IN	M/O LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	V/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.58789549-02	.36075553 01	-.58789549-02
.00000000 00	.11242134 08	.20353332 06	-.58750472-02	.29177837 01	-.60716977-02
.10000000 03	.47197764 08	.67608490 06	-.58511062-02	.22964671 01	-.65043283-02
.23500000 03	.18298819 09	.11436295 07	-.57113436-02	.13828684 01	-.68162997-02
.36000000 03	.38029787 09	.20546812 07	-.53139633-02	.44839437 00	-.81529009-02
.60000000 03	.80322907 09	.58831995 06	-.29176042-02	-.12638651 01	-.40711728-02
.77500000 03	.77113838 09	-.36243817 06	-.28352906-03	-.14789647 01	.42713401-03
.91000000 03	.62205859 09	-.23394874 07	.15510815-02	-.10968944 01	.61383117-02
.11600000 04	-.28678573 09	-.36270832 07	.21419155-02	.63440018 00	.72453493-02
.14000000 04	-.61441561 09	.14624861 07	.20936345-03	.14156603 01	-.21306143-02
.15410000 04	-.36442641 09	.18139360 07	-.11756891-02	.81837854 00	-.49547224-02
.16200000 04	-.22011144 09	.18407604 07	-.16035365-02	.42698491 00	-.51778283-02
.16800000 04	-.10917503 09	.18555122 07	-.17865540-02	.10925541 00	-.53894903-02
.17900000 04	.91159561 08	.16821966 07	-.18073756-02	-.46578669 00	-.45878659-02
.19100000 04	.22085694 09	.32754001 06	-.14207306-02	-.91073804 00	-.21736961-02
.19800000 04	.23105819 09	.84289792 05	-.10715050-02	-.10215034 01	-.12652746-02
.23900000 04	.16773255 09	-.38372851 06	.87217062-03	-.89717229 00	.17543051-02
.24700000 04	.13408308 09	-.45544051 06	.12827070-02	-.69700170 00	.28807438-02
.25190000 04	.11160935 09	-.46161301 06	.14867984-02	-.55014124 00	.31064932-02
.26460000 04	.52317350 08	-.47021856 06	.19213750-02	-.10480433 00	.39034582-02
.28100000 04	-.19743243 08	-.31064372 06	.20675619-02	.57535522 00	.36207805-02
.28900000 04	-.36115307 08	-.13753545 06	.18266448-02	.80988752 00	.24663446-02
.32225000 04	-.51145252 08	.59247279 05	-.34072801-03	.11885745 01	-.82241320-03
.32585000 04	-.48752640 08	.73543781 05	-.10606089-02	.11243691 01	-.22279705-02
.33700000 04	-.40015503 08	.90721640 05	-.30465331-02	.75313368 00	-.44865591-02
.35580000 04	-.19887499 08	.11190431 06	-.53222457-02	-.37698290 00	-.70985045-02
.36700000 04	-.83134299 07	.83871489 05	-.59418532-02	.11963657 01	-.72731467-02
.37785000 04	-.26930317 07	.14240204 05	-.61533568-02	-.19439396 01	-.63793917-02
.41135000 04	-.14053368 05	.13964834 04	-.66629645-02	-.43657718 01	-.84865925-02
.41340000 04	.88075081-03	.23575566-01	-.66678130-02	-.45324373 01	-.66913898-02

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VOYAGER STAGE 1 MODES

MODE 5

LIFTOFF

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.48687153 02	.23704388 04	.16175824 05	.16175824 05	.16175824 05	.00000000 00
STATION IN	M/O LB IN/IN	V/O LB/IN	B.SLOPE 1/IN	Y/O EQ. PHI	PHI PR. 1/IN
.11550000 03	.00000000 00	.00000000 00	-.81872489-02	.45837538 01	-.81872489-02
.00000000 00	.27190138 08	.49007230 06	-.81777779-02	.36121223 01	-.86512777-02
.10000000 03	.11262733 09	.15809084 07	-.81202662-02	.27140313 01	-.96477139-02
.23500000 03	.42502851 09	.25936131 07	-.77929923-02	.13335966 01	-.10298899-01
.36000000 03	.82752321 09	.36560802 07	-.68965077-02	-.81306502-01	-.11948086-01
.60000000 03	.10879811 10	-.30663945 07	-.27179285-02	-.16295672 01	.32946096-02
.77500000 03	.26445700 09	-.50206071 07	-.41734618-03	-.24837536 00	.94269813-02
.91000000 03	-.36225913 09	-.34184127 07	-.58355871-03	.93121266 00	.61192113-02
.11600000 04	-.17961776 09	.39992769 07	-.19547540-02	.33568445 00	-.75818774-02
.14000000 04	.51676091 09	-.23066125 06	-.10358622-02	-.11032279 01	-.66680423-03
.15410000 04	.41701625 09	-.77850754 06	.28866425-03	-.94470546 00	.19105549-02
.16200000 04	.35294537 09	-.85186812 06	.85258997-03	-.77459549 00	.25067028-02
.16800000 04	.29967912 09	-.92886026 06	.12155730-02	-.60882533 00	.30191852-02
.17900000 04	.18539511 09	-.12812982 07	.17001050-02	-.23419177 00	.38179532-02
.19100000 04	.18618827 08	-.11661451 07	.19079558-02	.31842463 00	.45887491-02
.19800000 04	-.53373031 08	-.97119361 06	.18798746-02	.61713897 00	.41125035-02
.23900000 04	-.26476033 09	.78969277 05	.11553644-03	.15789807 01	-.66002124-04
.24700000 04	-.24785619 09	.34493543 06	-.58433268-03	.15017615 01	-.17946324-02
.25190000 04	-.23027144 09	.37249345 06	-.98160835-03	.14015758 01	-.22886028-02
.26460000 04	-.17894405 09	.43262492 06	-.20903991-02	.10117655 01	-.39140163-02
.28100000 04	-.91826625 08	.71614082 06	-.40872783-02	.92542707-01	-.76679824-02
.28900000 04	-.36328426 08	.65014245 06	-.46223924-02	-.52266483 00	-.76463107-02
.32225000 04	.10332271 09	.65454969 05	-.20332423-02	-.26062680 01	-.25653965-02
.32585000 04	.10455664 09	.28365197 04	-.53381358-03	-.26727444 01	-.57883769-03
.33700000 04	.10201838 09	-.93823545 05	.41082213-02	-.24323771 01	.55974838-02
.35580000 04	.59036738 08	-.29470902 06	.10412251-01	-.33306559 00	.15090172-01
.36700000 04	.27377555 08	-.24600448 06	.12328410-01	.14562263 01	.16233243-01
.37785000 04	.10012103 08	-.50731055 05	.13063025-01	.31161275 01	.13868280-01
.41135000 04	.55109236 05	-.54668624 04	.15008393-01	.88629729 01	.22147414-01
.41340000 04	.44763221-02	.92411570-02	.15027782-01	.92885486 01	.15018537-01

TRA END2

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SATURN II/VOYAGER

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VOYAGER STAGE 1 MODES

MODE 1

25 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.78179178 01	.61119839 02	.13298784 05	.13298784 05	.13298784 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.21386318-02	.20508306 01	-.21386318-02
.00000000 00	.32454757 06	.59616543 04	-.21385197-02	.18035081 01	-.21442797-02
.10000000 03	.14150006 07	.21163001 05	-.21378140-02	.15886297 01	-.21582614-02
.23500000 03	.65724471 07	.47639834 05	-.21331401-02	.12952838 01	-.21791689-02
.36000000 03	.15001757 08	.94359393 05	-.21180398-02	.10190804 01	-.22484155-02
.60000000 03	.48958409 08	.17819905 06	-.19998448-02	.46494699 00	-.23492547-02
.77500000 03	.81661196 08	.18854753 06	-.17845551-02	.68108364-01	-.21542561-02
.91000000 03	.10692739 09	.18220344 06	-.15442113-02	-.20685036 00	-.19014729-02
.11600000 04	.14539609 09	.11510331 06	-.11376824-02	-.59642620 00	-.12996368-02
.14000000 04	.16019208 09	.21442780 04	-.60113861-03	-.82925569 00	-.60456946-03
.15410000 04	.15947349 09	-.64626039 04	-.15027469-03	-.88070812 00	-.13681093-03
.16200000 04	.15889676 09	-.84235030 04	.82626096-04	-.88225470 00	.98982411-04
.16800000 04	.15832328 09	-.10964236 05	.25887305-03	-.87089300 00	.28016283-03
.17900000 04	.15645358 09	-.33298083 05	.56742123-03	-.82151712 00	.62245938-03
.19100000 04	.14803034 09	-.10619466 06	.90474475-03	-.71703985 00	.11488704-02
.19800000 04	.14012138 09	-.11509108 06	.11264572-02	-.62769509 00	.13910344-02
.23900000 04	.91166068 08	-.12079102 06	.21703242-02	.17579485 00	.24480047-02
.24700000 04	.81545751 08	-.11954079 06	.24044871-02	.39125580 00	.28239285-02
.25190000 04	.75693497 08	-.11931520 06	.25350741-02	.53284895 00	.29537239-02
.26460000 04	.60593743 08	-.11839130 06	.29036006-02	.93513093 00	.34026482-02
.28100000 04	.42219378 08	-.91526107 05	.36447775-02	.15549308 01	.41024080-02
.28900000 04	.35965014 08	-.70082898 05	.39699854-02	.18898960 01	.42959523-02
.32225000 04	.16224517 08	-.46268404 05	.50090145-02	.34951062 01	.53851803-02
.32585000 04	.14597993 08	-.44072602 05	.52308416-02	.37059519 01	.59304067-02
.33700000 04	.97998281 07	-.39948404 05	.57734259-02	.43976003 01	.64075275-02
.35580000 04	.38773351 07	-.25890550 05	.62690875-02	.56305204 01	.66800486-02
.36700000 04	.13332249 07	-.16579148 05	.63816086-02	.63804209 01	.66447697-02
.37785000 04	.31786918 06	-.18787486 04	.64116688-02	.70909709 01	.64414902-02
.41135000 04	.14536319 04	-.14501972 03	.64679174-02	.92790679 01	.66572946-02
.41340000 04	.97791222-06	.59929402-03	.64683963-02	.94147683 01	.64677969-02

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VOYAGER STAGE 1 MODES

MODE 2

25 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.15354288 02	.23575417 03	.13298784 05	.13298784 05	.13298784 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	.00000000 00	.00000000 00	-.24306385-02	.19179945 01	-.24306385-02
.00000000 00	.11592011 07	.21180961 05	-.24302374-02	.16361469 01	-.24507021-02
.10000000 03	.49815715 07	.73130561 05	-.24277363-02	.13895265 01	-.24983938-02
.23500000 03	.22500498 08	.16023302 06	-.24116020-02	.10456952 01	-.25664165-02
.36000000 03	.49874350 08	.29569848 06	-.23606681-02	.71339196 00	-.27692325-02
.60000000 03	.14617605 09	.45653802 06	-.19919738-02	.21592246-01	-.28871464-02
.77500000 03	.22526075 09	.44908032 06	-.13783844-02	-.43218710 00	-.22589340-02
.91000000 03	.27989738 09	.31653173 06	-.73117545-03	-.68329016 00	-.13518259-02
.11600000 04	.30006650 09	-.16370519 06	.22282876-03	-.77568138 00	.45316773-03
.14000000 04	.20994835 09	-.55692044 06	.11282877-02	-.47295717 00	.20193605-02
.15410000 04	.12934248 09	-.57350171 06	.16069196-02	-.10952234 00	.28017149-02
.16200000 04	.84028842 08	-.57336205 06	.17629967-02	.11201336 00	.28763210-02
.16800000 04	.49679305 08	-.57102958 06	.18372666-02	.28691022 00	.29460619-02
.17900000 04	-.11690275 08	-.51715387 06	.18753486-02	.60676851 00	.27301484-02
.19100000 04	-.58297409 08	-.23866224 06	.17876624-02	.91863378 00	.23363111-02
.19800000 04	-.72543809 08	-.19147681 06	.16867043-02	.10731137 01	.21268808-02
.23900000 04	-.12819590 09	-.70937676 05	.74494592-03	.17167853 01	.90802104-03
.24700000 04	-.13270002 09	-.41093790 05	.39064966-03	.17772573 01	.53483839-03
.25190000 04	-.13463116 09	-.37721791 05	.16860600-03	.17977481 01	.30096316-03
.26460000 04	-.13886212 09	-.28911902 05	-.57930255-03	.17920049 01	-.45743200-03
.28100000 04	-.13839043 09	.93676168 05	-.26626772-02	.15442190 01	-.31310581-02
.28900000 04	-.12720923 09	.16473440 06	-.37744342-02	.12322224 01	-.45406406-02
.32225000 04	-.68913324 08	.17308111 06	-.78424018-02	-.10181938 01	-.92495651-02
.32585000 04	-.62731076 08	.17022027 06	-.87901176-02	-.14183972 01	-.11492027-01
.33700000 04	-.43991487 08	.16097045 06	-.11166766-01	-.28362379 01	-.13721853-01
.35580000 04	-.18407058 08	.11785430 06	-.13454546-01	-.55867387 01	-.13325249-01
.36700000 04	-.66857746 07	.78435479 05	-.13998997-01	-.73151522 01	-.15244005-01
.37785000 04	-.17639089 07	.10036460 05	-.14155514-01	-.89225872 01	-.14314823-01
.41135000 04	-.84392523 04	.84082198 03	-.14474933-01	-.13892100 02	-.15572938-01
.41340000 04	-.36582841-05	.16224847-02	-.14477757-01	-.14206887 02	-.14479379-01

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SYSTEMS

Voyager STAGE 1 MODES

MODE 3

25 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.22502954 02	.50638292 03	.13298784 05	.13298784 05	.13298784 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	.00000000 00	.00000000 00	-.22214447-02	.15444514 01	-.22214447-02
.00000000 00	.19895782 07	.36201324 05	-.22207547-02	.12859716 01	-.22557319-02
.10000000 03	.84510104 07	.12213763 06	-.22164881-02	.10578181 01	-.23344955-02
.23500000 03	.37263723 08	.26108754 06	-.21895708-02	.73216054 00	-.24418293-02
.36000000 03	.80320173 08	.44735816 06	-.2163794-02	.41025479 00	-.27244908-02
.60000000 03	.20865517 09	.51803999 06	-.15517984-02	-.25337840 00	-.25675631-02
.77500000 03	.28928566 09	.44410531 06	-.72685813-03	-.61470378 00	-.15976528-02
.91000000 03	.33336573 09	.10637466 06	.76096522-04	-.74634876 00	-.13248124-03
.11600000 04	.24066792 09	-.78432249 06	.10447032-02	-.47656453 00	.21482725-02
.14000000 04	.99453011 07	-.99405729 06	.14838374-02	.18865288 00	.30743291-02
.15410000 04	-.12784113 09	-.97151233 06	.13171714-02	.67774189 00	.33411553-02
.16200000 04	-.20410947 09	-.95644975 06	.10742139-02	.92102902 00	.29313979-02
.16800000 04	-.26086595 09	-.93207638 06	.81576409-03	.10882505 01	.26256211-02
.17900000 04	-.35532686 09	-.65088344 06	.21063361-03	.13224256 01	.12864740-02
.19100000 04	-.37081675 09	.40315007 06	-.61659024-03	.13230110 01	-.15433720-02
.19800000 04	-.33530328 09	.53984990 06	-.11606412-02	.11788458 01	-.24016754-02
.23900000 04	-.86317971 08	.62845359 06	-.30883379-02	-.34181390 00	-.45330588-02
.24700000 04	-.36734601 08	.60826456 06	-.32548248-02	-.76281846 00	-.53890864-02
.25190000 04	-.70140784 07	.60463941 06	-.32911338-02	-.10276785 01	-.54126756-02
.26460000 04	.68935320 08	.59018383 06	-.31042337-02	-.17307082 01	-.55919991-02
.28100000 04	.15072487 09	.21197457 06	-.13224171-02	-.25125944 01	-.23822899-02
.28900000 04	.15396099 09	-.58959765 05	-.38050286-04	-.25820386 01	.23618118-03
.32225000 04	.10488954 09	-.22227740 06	.55971209-02	-.14203691 01	.74042542-02
.32585000 04	.96768901 08	-.22856613 06	.70493322-02	-.10603282 01	.10677366-01
.33700000 04	.71212904 08	-.22893693 06	.10795676-01	.35077322 00	.14429596-01
.35580000 04	.31545181 08	-.19356695 06	.14608209-01	.34151013 01	.17680700-01
.36700000 04	.12049655 08	-.13397741 06	.15558333-01	.54221224 01	.17684958-01
.37785000 04	.34469689 07	-.19046394 05	.15849505-01	.72659149 01	.16151828-01
.41135000 04	.17067398 05	-.16987520 04	.16484729-01	.13026572 02	.18703082-01
.41340000 04	-.11783229-04	.33073016-02	.16490509-01	.13401018 02	.16487201-01

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VOYAGER STAGE 1 MODES

MODE 4

25 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.38398554 02	.14744490 04	.13298784 05	.13298784 05	.13298784 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	.00000000 00	.00000000 00	-.62223191-02	.36173756 01	-.62223191-02
.00000000 00	.13392452 08	.24189370 06	-.62176588-02	.28858891 01	-.64513725-02
.10000000 03	.55699437 08	.78121637 06	-.61892500-02	.22243498 01	-.69440484-02
.23500000 03	.23409152 09	.15825533 07	-.60175547-02	.12254906 01	-.75465917-02
.36000000 03	.47290759 09	.22176465 07	-.55109978-02	.21061186 00	-.85751032-02
.60000000 03	.86180188 09	.25159036 06	-.27952476-02	-.14485484 01	-.32885620-02
.77500000 03	.76792653 09	-.72670192 06	-.68663044-04	-.15100190 01	.13562427-02
.91000000 03	.58052885 09	-.24592665 07	.17017467-02	-.10270235 01	.65238378-02
.11600000 04	-.28905904 09	-.33483177 07	.21969707-02	.67397734 00	.69081715-02
.14000000 04	-.59615243 09	.12884477 07	.32603143-03	.14452694 01	-.17354848-02
.15410000 04	-.37306448 09	.16283586 07	-.10456375-02	.92232182 00	-.44380512-02
.16200000 04	-.24299953 09	.16670835 07	-.14966608-02	.56809336 00	-.47337161-02
.16800000 04	-.14210803 09	.16955366 07	-.17107636-02	.27540438 00	-.50030677-02
.17900000 04	.43461573 08	.16124425 07	-.18116566-02	-.26771703 00	-.44768508-02
.19100000 04	.17750525 09	.43829520 06	-.15292161-02	-.72956009 00	-.25367913-02
.19800000 04	.19588548 09	.20188458 06	-.12404307-02	-.86891062 00	-.17045331-02
.23900000 04	.17124980 09	-.32819986 06	.58031263-03	-.94009076 00	.13347951-02
.24700000 04	.14124171 09	-.42024910 06	.10056914-02	-.77486031 00	.24802496-02
.25190000 04	.12043766 09	-.42864480 06	.12230751-02	-.64711782 00	.27270919-02
.26460000 04	.64985405 08	-.44258060 06	.17174905-02	-.24671396 00	.35830731-02
.28100000 04	-.47932024 07	-.33131881 06	.20811668-02	.40480127 00	.37377608-02
.28900000 04	-.23799454 08	-.17575639 06	.19550583-02	.65770768 00	.27725299-02
.32225000 04	-.49536247 08	.40880835 05	.30946443-04	.11873034 01	-.30141807-03
.32585000 04	-.47752912 08	.58093949 05	-.67027721-03	.11467562 01	-.15924034-02
.33700000 04	-.40592177 08	.80349768 05	-.26486143-02	.84515443 00	-.39240074-02
.35580000 04	-.20861443 08	.11440304 06	-.49990237-02	-.21048094 00	-.68149449-02
.36700000 04	-.89333312 07	.87774441 05	-.56550626-02	-.10014674 01	-.70483078-02
.37785000 04	-.29816429 07	.15601830 05	-.58852784-02	-.17243268 01	-.61329265-02
.41135000 04	-.15760302 05	.15654867 04	-.64531296-02	-.40971736 01	-.84974543-02
.41340000 04	-.22078709-03	.40556690-02	-.64585923-02	-.42631846 01	-.64626480-02

TRW SYSTEMS
06/03/68

VOYAGER STAGE 1 MODES

MODE 5

25 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.69863914-02	.48809665 04	.13298784 05	.13298784 05	.13298784 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.11550000 03	-.00000000 00	-.00000000 00	-.10881060-02	.54493432 00	-.10881060-02
.00000000 00	.65848588 07	.11789819 06	-.10858051-02	.41296078 00	-.11997164-02
.10000000 03	.26645525 08	.35764284 06	-.10720264-02	.28553583 00	-.14175750-02
.23500000 03	.10363118 09	.65323737 06	-.99396480-03	.70602065-01	-.16251120-02
.36000000 03	.18228544 09	.48011607 06	-.78342483-03	-.13557737 00	-.14467976-02
.60000000 03	.91787372 08	-.11497045 07	-.14438032-03	-.75791438-01	.21099422-02
.77500000 03	-.11416955 09	-.11534726 07	-.18279738-03	.30935323 00	.20789135-02
.91000000 03	-.18114514 09	.71467455 06	-.61461993-03	.38890215 00	-.20159426-02
.11600000 04	.25839005 09	.10233941 07	-.49750331-03	-.36583637 00	-.19374547-02
.14000000 04	-.33335528 08	-.24936821 07	.14371145-03	.64176912-01	.41336029-02
.15410000 04	-.37202731 09	-.23491841 07	-.43124413-03	.76072504 00	.44628893-02
.16200000 04	-.55233037 09	-.21836397 07	-.11089490-02	.10517155 01	.31311280-02
.16800000 04	-.67646454 09	-.19190951 07	-.17930263-02	.12063842 01	.19333720-02
.17900000 04	-.80818553 09	.74632716 06	-.32880620-02	.11825912 01	-.45216605-02
.19100000 04	-.34539701 09	.52006041 07	-.46219029-02	-.27145948 00	-.16577315-01
.19800000 04	-.58406938 07	.46404639 07	-.48878347-02	-.13879254 01	-.15555568-01
.23900000 04	.80298277 09	-.15969317 07	.70138377-03	-.43659797 01	.43724911-02
.24700000 04	.61721292 09	-.30201741 07	.26526956-02	-.35970712 01	.13249797-01
.25190000 04	.46599720 09	-.31474572 07	.35531722-02	-.29134210 01	.14596882-01
.26460000 04	.51847449 08	-.33384232 07	.48843688-02	-.76875877 00	.18956618-01
.28100000 04	-.42095137 09	-.94790180 06	.12713457-02	.20909414 01	.60108545-02
.28900000 04	-.38631696 09	.12110214 07	-.22164998-02	.18899510 01	-.78491574-02
.32225000 04	.88734574 08	.10622274 07	-.69624225-02	-.29053698 01	-.15598417-01
.32585000 04	.12417964 09	.90047493 06	-.54224765-02	-.37066634 01	-.19715729-01
.33700000 04	.21379993 09	.50652852 06	.22559933-02	-.53439108 01	-.57841419-02
.35580000 04	.17215282 09	.63807601 06	.18240939-01	-.27000177 01	.28369130-01
.36700000 04	.96466470 08	-.68793036 06	.24290993-01	.91462260 00	.35210521-01
.37785000 04	.42467462 08	-.20126273 06	.27113744-01	.45814784 01	.30308390-01
.41135000 04	.25539754 06	-.25259308 05	.35728910-01	.19697874 02	.68714326-01
.41340000 04	.21286497-02	-.20463308-01	.35821774-01	.20976355 02	.35842238-01

END2

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SATURN II/VOYAGER

TRW SYSTEMS
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VOYAGER STAGE 1 MODES

MODE 1

50 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.82414265 01	.67921110 02	.10288195 05	.10288195 05	.10288195 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.11550000 03	.00000000 00	.00000000 00	-.20075099-02	.19485811 01	-.20075099-02
.00000000 00	.34286777 06	.62999731 04	-.20073915-02	.17163857 01	-.20134784-02
.10000000 03	.14915135 07	.22056622 05	-.20066461-02	.15145654 01	-.20279568-02
.23500000 03	.67938501 07	.48501763 05	-.20017824-02	.12387979 01	-.20486440-02
.36000000 03	.14749961 08	.83418359 05	-.19865392-02	.97966167 00	-.21017977-02
.60000000 03	.42956860 08	.14442179 06	-.18790734-02	.46599492 00	-.21622534-02
.77500000 03	.69406183 08	.15254939 06	-.16938537-02	.10022435 00	-.19929702-02
.91000000 03	.89947303 08	.14971582 06	-.14908389-02	-.15560862 00	-.17843993-02
.11600000 04	.12295772 09	.10686716 06	-.11487175-02	-.53221258 00	-.12990834-02
.14000000 04	.13991326 09	.29633611 05	-.68840144-03	-.78016535 00	-.73581521-03
.15410000 04	.14333057 09	.22922498 05	-.28890975-03	-.85629746 00	-.33666495-03
.16200000 04	.14506941 09	.20780892 05	-.77929948-04	-.87418065 00	-.11828119-03
.16800000 04	.14624091 09	.17959601 05	.83924215-04	-.87628209 00	.49051203-04
.17900000 04	.14746093 09	-.75880251 04	.37180786-03	-.85314286 00	.38435005-03
.19100000 04	.14137253 09	-.93426177 05	.69233298-03	-.77766695 00	.90710580-03
.19800000 04	.13425693 09	-.10423241 06	.90442541-03	-.70535859 00	.11440401-02
.23900000 04	.88998647 08	-.11372540 06	.19132767-02	-.97183887-02	.21747145-02
.24700000 04	.79910925 08	-.11330335 06	.21422990-02	.18317963 00	.25398546-02
.25190000 04	.74362057 08	-.11316947 06	.22704231-02	.31079866 00	.26675090-02
.26460000 04	.60027797 08	-.11248122 06	.26339566-02	.67619686 00	.31080917-02
.28100000 04	.42481678 08	-.88971310 05	.33743263-02	.12476587 01	.38191828-02
.28900000 04	.36324265 08	-.69626353 05	.37022308-02	.15606274 01	.40260742-02
.32225000 04	.16538885 08	-.46872420 05	.47569086-02	.30795036 01	.51379851-02
.32585000 04	.14889866 08	-.44716906 05	.49831024-02	.32817188 01	.56928945-02
.33700000 04	.10018940 08	-.40616019 05	.55370910-02	.39475650 01	.61817896-02
.35580000 04	.39762967 07	-.26489383 05	.60446040-02	.51392172 01	.64650703-02
.36700000 04	.13716297 07	-.16998850 05	.61601230-02	.58651302 01	.64299460-02
.37785000 04	.32911385 06	-.19404617 04	.61911201-02	.65521416 01	.62219210-02
.41135000 04	.15095320 04	-.15058199 03	.62494463-02	.86678294 01	.64460869-02
.41340000 04	-.92915586-06	-.92030347-03	.62499440-02	.87991712 01	.62508643-02

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VOYAGER STAGE 1 MODES

MODE 2

50 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.16271143 02	.26475011 03	.10288195 05	.10288195 05	.10288195 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.24551099-02	.19053580 01	-.24551099-02
.00000000 00	.12919677 07	.23594727 05	-.24546627-02	.16205570 01	-.24774595-02
.10000000 03	.55282458 07	.80034082 05	-.24518786-02	.13711052 01	-.25292061-02
.23500000 03	.24399817 08	.17074721 06	-.24342465-02	.10227896 01	-.25992197-02
.36000000 03	.51521379 08	.27452168 06	-.23802820-02	.68832156 00	-.27595865-02
.60000000 03	.13568472 09	.38969035 06	-.20262147-02	.11500178-01	-.27903134-02
.77500000 03	.20313636 09	.38260310 06	-.14665005-02	-.42961603 00	-.22167027-02
.91000000 03	.25021328 09	.28198526 06	-.88620306-03	-.68208884 00	-.14391153-02
.11600000 04	.27533868 09	-.91436899 05	-.25636484-04	-.83194438 00	.10301845-03
.14000000 04	.21038240 09	-.43494035 06	.83528378-03	-.63376871 00	.15311883-02
.15410000 04	.14678278 09	-.45406350 06	.13391974-02	-.34585820 00	.22851629-02
.16200000 04	.11082225 09	-.45639196 06	.15276542-02	-.16244489 00	.24138521-02
.16800000 04	.83402003 08	-.45740516 06	.16355621-02	-.14152867-01	.25237274-02
.17900000 04	.33599985 08	-.43521294 06	.17511865-02	.26603467 00	.24705467-02
.19100000 04	-.97250945 07	-.26565260 06	.17699296-02	.56330160 00	.23806252-02
.19800000 04	-.26595677 08	-.23225636 06	.17417685-02	.72514462 00	.22756912-02
.23900000 04	-.10220428 09	-.12414082 06	.11280030-02	.15106945 01	.14133842-02
.24700000 04	-.11096483 09	-.94124630 05	.83841805-03	.16187674 01	.11686799-02
.25190000 04	-.11549201 09	-.90639994 05	.65032011-03	.16711570 01	.96835517-03
.26460000 04	-.12640859 09	-.81195279 05	-.12900468-04	.17575827 01	.32935698-03
.28100000 04	-.13369894 09	.62263983 05	-.19802525-02	.16491450 01	-.22915724-02
.28900000 04	-.12423292 09	.14919604 06	-.30607747-02	.14012930 01	-.37547097-02
.32225000 04	-.69016278 08	.17021954 06	-.70910766-02	-.58629999 00	-.84749752-02
.32585000 04	-.62922041 08	.16818564 06	-.80409442-02	-.95805730 00	-.10710558-01
.33700000 04	-.44376343 08	.16002047 06	-.10430834-01	-.22899425 01	-.12970841-01
.35580000 04	-.18697486 08	.11909495 06	-.12746722-01	-.49063556 01	-.14637118-01
.36700000 04	-.68348212 07	.79640809 05	-.13301021-01	-.65583473 01	-.14565160-01
.37785000 04	-.18228857 07	.10330873 05	-.13461694-01	-.80917419 01	-.13625676-01
.41135000 04	-.87622063 04	.87287945 03	-.13792581-01	-.12836905 02	-.14932449-01
.41340000 04	.45427275-06	.18324684-02	-.13795517-01	-.13138395 02	-.13797350-01

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VOYAGER STAGE 1 MODES

MODE 3

50 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.23339660 02	.54473973 03	.10288195 05	.10288195 05	.10288195 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.25090355-02	.17121597 01	-.25090355-02
.00000000 00	.23697915 07	.43090612 05	-.25082135-02	.14200995 01	-.25498469-02
.10000000 03	.10019190 08	.14273029 06	-.25031389-02	.11620837 01	-.26410425-02
.23500000 03	.43150336 08	.29698155 06	-.24717229-02	.79379795 00	-.27586616-02
.36000000 03	.88965988 08	.44808539 06	-.23774365-02	.43414862 00	-.29965527-02
.60000000 03	.21206104 09	.49649025 06	-.17990751-02	-.28259770 00	-.27725854-02
.77500000 03	.29062875 09	.43318788 06	-.96666606-03	-.68240733 00	-.18180540-02
.91000000 03	.33601841 09	.15558862 06	-.16041457-03	-.84880503 00	-.46549029-02
.11600000 04	.27233963 09	-.63303669 06	.85667239-03	-.67299288 00	.17473773-02
.14000000 04	.64799350 08	-.10024086 07	.14573039-02	-.69751079-01	.30611577-02
.15410000 04	-.76661649 08	-.10006899 07	.14404705-02	.43394045 00	.35252411-02
.16200000 04	-.15535730 09	-.98912457 06	.12706452-02	.69459372 00	.31912754-02
.16800000 04	.21417865 09	-.96851113 06	.10652376-02	.87921328 00	.29458417-02
.17900000 04	.31333838 09	-.70875858 06	.54741981-03	.11545254 01	.17189216-02
.19100000 04	.33841680 09	.30969472 06	-.19767734-03	.12198345 01	-.90961921-03
.19800000 04	-.30947066 09	.44626029 06	-.69693530-03	.11217172 01	-.17228210-02
.23900000 04	-.95162770 08	.55899061 06	-.25555784-02	-.10419595 00	-.38406142-02
.24700000 04	-.50788512 08	.54781324 06	-.27532771-02	-.46629085 00	-.46754288-02
.25190000 04	-.24003617 08	.54528048 06	-.28153754-02	-.69688655 00	-.47286402-02
.26460000 04	.44601074 08	.53394000 06	-.27430904-02	-.13175671 01	-.49937747-02
.28100000 04	.11933134 09	.20792710 06	-.13921666-02	-.20367281 01	-.24318021-02
.28900000 04	.12394179 09	-.29887447 05	-.36567204-03	-.21288173 01	-.22666066-03
.32225000 04	.87248075 08	-.18032180 06	.42626735-02	-.13093489 01	.57287044-02
.32585000 04	.80637263 08	-.18668936 06	.54717220-02	-.10263453 01	.84350452-02
.33700000 04	.59714544 08	-.18859563 06	.86024456-02	.99063289-01	.11598027-01
.35580000 04	.26640097 08	-.16260523 06	.11811104-01	.25819030 01	.14392130-01
.36700000 04	.10236849 08	-.11309825 06	.12619243-01	.42170808 01	.14410453-01
.37785000 04	.29547267 07	-.16274362 05	.12863501-01	.57177415 01	.13121825-01
.41135000 04	.14685146 05	-.14614733 04	.13409054-01	.10414300 02	.15317550-01
.41340000 04	.26125484-04	-.18682782-02	.13414033-01	.10720601 02	.13415901-01

06/03/68

VOYAGER STAGE 1 MODES

MODE 4

50 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ OM	ACCELERATION
.43997660 02	.19357941 04	.10288195 05	.10288195 05	.10288195 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.63621296-02	.35019537 01	-.63621296-02
.00000000 00	.16944117 08	.30523441 06	-.63562260-02	.27509227 01	-.66511384-02
.10000000 03	.69746124 08	.95601740 06	-.63204404-02	.20656756 01	-.72441286-02
.23500000 03	.28249955 09	.18555820 07	-.61106822-02	.10179856 01	-.79035150-02
.36000000 03	.54287677 09	.22388451 07	-.55144157-02	-.27850530-01	-.86078113-02
.60000000 03	.88982325 09	.11012704 05	-.25990587-02	-.15902727 01	-.26206522-02
.77500000 03	.75655128 09	-.96512612 06	.15538922-03	-.15358548 01	.20477933-02
.91000000 03	.54663078 09	-.24833364 07	.18616770-02	-.98211784 00	.67309639-02
.11600000 04	-.28012566 09	-.31342010 07	.23022836-02	.69151007 00	.67122146-02
.14000000 04	-.59014905 09	.1012142 07	.49288845-03	.15018844 01	-.11234543-02
.15410000 04	-.40743788 09	.13545915 07	-.91947101-03	.10850556 01	-.37415366-02
.16200000 04	-.29812188 09	.14188557 07	-.14362057-02	.77868633 00	-.41912651-02
.16800000 04	-.21130935 09	.14770688 07	-.17198849-02	.51496392 00	-.45876315-02
.17900000 04	-.43596748 08	.15899661 07	-.19788990-02	-.35999254-02	-.46043362-02
.19100000 04	.11307048 09	.74862261 06	-.18665863-02	-.54398216 00	-.35875578-02
.19800000 04	.15303940 09	.50589960 06	-.16602600-02	-.75965752 00	-.28232475-02
.23900000 04	.21404886 09	-.26117763 06	.23525992-03	-.12114814 01	.83566828-03
.24700000 04	.18665918 09	-.42253725 06	.78150374-03	-.10774945 01	.22640905-02
.25190000 04	.16556077 09	-.43831423 06	.10741322-02	-.95785879 00	.26120768-02
.26460000 04	.10776658 09	-.46912610 06	.18089070-02	-.55310725 00	.37863853-02
.28100000 04	.27870884 08	-.47175957 06	.27487260-02	.20581501 00	.51075239-02
.28900000 04	-.34864721 07	-.33074621 06	.28452243-02	.58042927 00	.43835786-02
.32225000 04	-.65613542 08	.81390489 04	.75106662-03	.16244173 01	.68489549-03
.32585000 04	-.64754635 08	.39565275 05	-.18893823-03	.16206043 01	-.81695846-03
.33700000 04	-.58994472 08	.84512925 05	-.29650813-02	.13510641 01	-.43065563-02
.35580000 04	-.32261891 08	.16853398 06	-.64984258-02	.49933909-02	-.91735684-02
.36700000 04	-.14418060 08	.13509685 06	-.75301595-02	-.10713437 01	-.96745539-02
.37785000 04	-.50603200 07	.26015333 05	-.79099919-02	-.20611598 01	-.83229335-02
.41135000 04	-.27343400 05	.27141142 04	-.88843094-02	-.53984273 01	-.12428594-01
.41340000 04	.17099383-02	.96818578-02	-.88938638-02	-.56390619 01	-.89035457-02

TRW SYSTEMS
06/03/68

VOYAGER STAGE 1 MODES

MODE 5

50 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.52353531 02	.27408922 04	.10288195 05	.10288195 05	.10288195 05	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.11550000 03	.00000000 00	.00000000 00	-.25756627-02	.13411037 01	-.25756627-02
.00000000 00	.91410354 07	.16416844 06	-.25724732-02	.10348725 01	-.27310900-02
.10000000 03	.37285683 08	.50393415 06	-.25532564-02	.75118114 00	-.30401493-02
.23500000 03	.14751403 09	.94980573 06	-.24428613-02	.30587210 00	-.33605479-02
.36000000 03	.27479657 09	.10170372 07	-.21361099-02	-.13580757 00	-.35413425-02
.60000000 03	.36570831 09	-.59328586 06	-.79481594-03	-.63406409 00	.29005830-03
.77500000 03	.19731291 09	-.10596583 07	.15314113-03	-.35164558 00	.22309025-02
.91000000 03	.38106409 08	-.12887405 07	.46095200-03	.65675298-02	.29878940-02
.11600000 04	-.18113365 09	-.14720656 06	.14856486-03	.38516634 00	.35568967-03
.14000000 04	-.20118354 08	.12691609 07	-.29418539-03	.11020666 00	-.23248428-02
.15410000 04	.16136883 09	.12798289 07	-.94882695-04	-.30134002 00	-.27611928-02
.16200000 04	.26120237 09	.12387420 07	.21460192-03	-.49142115 00	-.21907223-02
.16800000 04	.33366436 09	.11660645 07	.54547123-03	-.60972472 00	-.17187316-02
.17900000 04	.43750242 09	.32452986 06	.13115237-02	-.70486205 00	.77511070-03
.19100000 04	.32272563 09	-.19425486 07	.21922121-02	-.24311436 00	.66578410-02
.19800000 04	.18171014 09	-.20139848 07	.25805573-02	.24937373 00	.72104073-02
.23900000 04	-.40825413 09	-.47927555 06	.10765829-02	.25418328 01	.21783657-02
.24700000 04	-.42631365 09	.37995376 05	-.64357914-04	.26405787 01	-.19767502-03
.25190000 04	-.42303751 09	.99607850 05	-.77014144-03	.26086160 01	-.11056076-02
.26460000 04	-.40175130 09	.23665646 06	-.30245561-02	.22953922 01	-.40221195-02
.28100000 04	-.30323834 09	.14770963 07	-.84377211-02	.91285220 00	-.15823203-01
.28900000 04	-.16882369 09	.17165958 07	-.10429577-01	-.48759305 00	-.18413743-01
.32225000 04	.23436167 09	.32727271 06	-.60715215-02	-.60199766 01	-.87322752-02
.32585000 04	.24312085 09	.15799033 06	-.26263562-02	-.63197706 01	-.51341392-02
.33700000 04	.25263771 09	-.11950726 06	.85304033-02	-.61463389 01	.10427344-01
.35580000 04	.15338606 09	-.73600273 06	.24566405-01	-.13384851 01	.36248988-01
.36700000 04	.73305082 08	-.63619447 06	.29606190-01	.29998756 01	.39704515-01
.37785000 04	.27681850 08	-.13867767 06	.31602000-01	.70623866 01	.33803232-01
.41135000 04	.15462146 06	-.15330988 05	.37019484-01	.21462341 02	.57039787-01
.41340000 04	-.16370895-03	-.13424773-01	.37074182-01	.22552038 02	.37087607-01

TRA EN02

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SATURN II/VOYAGER

06/02/68

VOYAGER STAGE 1 MODES

MODE 1

75 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.87479372 01	.76526404 02	.72860925 04	.72860924 04	.72860924 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. I/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.18105506-02	.18082502 01	-.18105506-02
.00000000 00	.35893880 06	.65996085 04	-.18104267-02	.15987882 01	-.18168031-02
.10000000 03	.15594164 07	.22823824 05	-.18096461-02	.14166156 01	-.18316980-02
.23500000 03	.69735219 07	.49030294 05	-.18046211-02	.11673445 01	-.18519934-02
.36000000 03	.14332160 08	.70506896 05	-.17893634-02	.93365293 00	-.18867822-02
.60000000 03	.35874998 08	.10527128 06	-.16948259-02	.47757244 00	-.19012402-02
.77500000 03	.55052148 08	.11069812 06	-.15449102-02	.15556719 00	-.17619653-02
.91000000 03	.70056142 08	.11095192 06	-.13855915-02	-.72091585-01	-.16031442-02
.11600000 04	.96072908 08	.93200559 05	-.11196698-02	-.42206478 00	-.12508062-02
.14000000 04	.11435485 09	.56341153 05	-.75274288-03	-.67624585 00	-.84288873-03
.15410000 04	.12184624 09	.51948020 05	-.41960639-03	-.77475129 00	-.52783142-03
.16200000 04	.12587606 09	.49736900 05	-.23838092-03	-.80860536 00	-.33495742-03
.16800000 04	.12878126 09	.46769031 05	-.96888747-04	-.82432077 00	-.18770240-03
.17900000 04	.13311002 09	.19050726 05	.15980364-03	-.82869097 00	.12831484-03
.19100000 04	.12965842 09	-.76663843 05	.45198119-03	-.78546227 00	.62821991-03
.19800000 04	.12363399 09	-.89041776 05	.64690158-03	-.73309775 00	.85159370-03
.23900000 04	.83891782 08	-.10226343 06	.15860337-02	-.17171685 00	.18211220-02
.24700000 04	.75684777 08	-.10276711 06	.18024178-02	-.84719193-02	.21630041-02
.25190000 04	.70649599 08	-.10273924 06	.19239495-02	.10052552 00	.22844380-02
.26460000 04	.57621989 08	-.10233665 06	.22710942-02	.41587531 00	.27024675-02
.28100000 04	.41550936 08	-.83386822 05	.29889725-02	.91897412 00	.34059066-02
.28900000 04	.35687360 08	-.67047608 05	.33104823-02	.11994347 01	.36223316-02
.32225000 04	.16429104 08	-.46215431 05	.43528894-02	.25828205 01	.47286245-02
.32585000 04	.14801704 08	-.44171829 05	.45776628-02	.27701126 01	.52788029-02
.33700000 04	.99870481 07	-.40220229 05	.51290291-02	.33896894 01	.57674454-02
.35580000 04	.39781365 07	-.26428675 05	.56358353-02	.45039863 01	.60553381-02
.36700000 04	.13774150 07	-.17002687 05	.57515562-02	.51840641 01	.60214401-02
.37785000 04	.33295032 06	-.19575453 04	.57827672-02	.58267893 01	.58138394-02
.41135000 04	.15323461 04	-.15284196 03	.58418758-02	.78062267 01	.60414678-02
.41340000 04	.86224087-06	-.16354688-02	.58423818-02	.79292623 01	.58440171-02

TRW SYSTEMS
08/03/68

VOYAGER STAGE 1 MODES

MODE 2

75 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.17648962 02	.31148588 03	.72860925 04	.72860924 04	.72860924 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.11550000 03	-.00000000 00	-.00000000 00	-.22084573-02	.16528118 01	-.22084573-02
.00000000 00	.13157594 07	.24001614 05	-.22080015-02	.13964764 01	-.22311915-02
.10000000 03	.55962997 07	.79704991 05	-.22051723-02	.11716498 01	-.22821819-02
.23500000 03	.24046582 08	.16484778 06	-.21876389-02	.85704590 00	-.23469121-02
.36000000 03	.48100033 08	.22307307 06	-.21357953-02	.55724841 00	-.24440137-02
.60000000 03	.11031986 09	.27581439 06	-.18338336-02	-.28449299-01	-.23746461-02
.77500000 03	.15785065 09	.26868363 06	-.13907766-02	-.40608723 00	-.19176072-02
.91000000 03	.19142639 09	.21069565 06	-.94426068-03	-.63050384 00	-.13573894-02
.11600000 04	.21827036 09	-.34198835 04	-.27832211-03	-.82163949 00	-.27351021-03
.14000000 04	.19087793 09	-.22209280 06	.44296273-03	-.75993251 00	.79831122-03
.15410000 04	.15759376 09	-.24039986 06	.93467758-03	-.59236173 00	.14355106-02
.16200000 04	.13839313 09	-.24634303 06	.11512445-02	-.47249981 00	.16295804-02
.16800000 04	.12344038 09	-.29249175 06	.12967406-02	-.36994275 00	.17870158-02
.17900000 04	.94667883 08	-.28216394 06	.15115978-02	-.16115043 00	.19779845-02
.19100000 04	.58640908 08	-.29798924 06	.16781343-02	.10257070 00	.23631670-02
.19800000 04	.38226119 08	-.28865896 06	.17525810-02	.26975929 00	.24161648-02
.23900000 04	-.66478339 08	-.20420550 06	.15992069-02	.12300362 01	.20686448-02
.24700000 04	-.81669038 08	-.17451839 06	.13977930-02	.14010408 01	.20101383-02
.25190000 04	-.90132965 08	-.17090869 06	.12550856-02	.14957917 01	.18547652-02
.26460000 04	-.11119452 09	-.16054399 06	.70026975-03	.17048783 01	.13770009-02
.28100000 04	-.13019629 09	.16942070 05	-.11455397-02	.17796444 01	-.12282501-02
.28900000 04	-.12309215 09	.12926201 06	-.22079192-02	.16107129 01	-.28091378-02
.32225000 04	-.71149320 08	.17047801 06	-.62935771-02	-.80673671-01	-.76795771-02
.32585000 04	-.65022907 08	.16970018 06	-.72739830-02	-.42479238 00	-.99676366-02
.33700000 04	-.46261441 08	.16304231 06	-.97533190-02	-.16796586 01	-.12341292-01
.35580000 04	-.19699379 08	.12448895 06	-.12180566-01	-.41942470 01	-.14156581-01
.36700000 04	-.72705701 07	.83856906 05	-.12766571-01	-.57938294 01	-.14097633-01
.37785000 04	-.19702906 07	.11101426 05	-.12938546-01	-.72745389 01	-.13114759-01
.41135000 04	-.95356249 04	.94973520 03	-.13297438-01	-.11864245 02	-.14537670-01
.41340000 04	.63049766-05	.31120416-02	-.13300641-01	-.12157240 02	-.13303753-01

TRW SYSTEMS
06/03/68

VOYAGER STAGE 1 MODES

MODE 3

75 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ OM	ACCELERATION
.25608497 02	.65579510 03	.72860925 04	.72860923 04	.72860923 04	.00000000 00
STATION IN	M/O LB IN/IN	V/O LB/IN	R.SLOPE 1/IN	Y/Q EQ. PHI	PHI PP. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.32680551-02	.20899916 01	-.32680551-02
.00000000 00	.34670799 07	.62889743 05	-.32668511-02	.17092151 01	-.33276141-02
.10000000 03	.14520321 08	.20252562 06	-.32594563-02	.13721371 01	-.34551332-02
.23500000 03	.60464695 08	.40569590 06	-.32149436-02	.89007004 00	-.36069203-02
.36000000 03	.11814391 09	.51805647 06	-.30862088-02	.42543798 00	-.38020035-02
.60000000 03	.24871100 09	.50750530 06	-.23783968-02	-.45888862 00	-.33735052-02
.77500000 03	.32890096 09	.43764396 06	-.14219591-02	-.95248915 00	-.22800845-02
.91000000 03	.37620083 09	.19300312 06	-.51676965-03	-.11774700 01	-.89520715-03
.11600000 04	.33315246 09	-.52390913 06	.65648758-03	-.11006019 01	.13936461-02
.14000000 04	.14280158 09	-.10093771 07	.15056762-02	-.54279482 00	.31206795-02
.15410000 04	-.21523269 07	-.10311836 07	.17043703-02	-.96925849-02	.38526694-02
.16200000 04	-.83531787 08	-.10274348 07	.16416626-02	.28127743 00	.36366815-02
.16800000 04	-.14487941 09	-.10149740 07	.15147013-02	.49543083 00	.34855246-02
.17900000 04	-.25055539 09	-.79808528 06	.11271202-02	.83964188 00	.24462694-02
.19100000 04	-.29103540 09	.16132896 06	.50367023-03	.10130179 01	.13279905-03
.19800000 04	-.27240677 09	.29986710 06	.69353072-04	.99007887 00	-.61999657-03
.23900000 04	-.11054945 09	.45970712 06	-.17063190-02	.23220481 00	-.27631170-02
.24700000 04	-.73501045 08	.46439293 06	-.19559640-02	-.39380352-01	-.35854129-02
.25190000 04	-.50758440 08	.46372093 06	-.20591580-02	-.21770368 00	-.36862490-02
.26460000 04	.78072901 07	.45745066 06	-.21628645-02	-.71350583 00	-.40911280-02
.28100000 04	.73204713 08	.20777860 06	-.14518323-02	-.13379920 01	-.24907252-02
.28900000 04	.80193662 08	.16377582 05	-.80263914-03	-.14615917 01	-.87881393-03
.32225000 04	.62257209 08	-.11929190 06	.23810099-02	-.11287145 01	.33508628-02
.32585000 04	.57836241 08	-.12612859 06	.32459773-02	-.95535415 00	.52480184-02
.33700000 04	.43598848 08	-.13076084 06	.55098080-02	-.23533947 00	.75853769-02
.35580000 04	.19839277 08	-.11931682 06	.78766589-02	.14281702 01	.97705766-02
.36700000 04	.77489371 07	-.84128443 05	.84791248-02	.25411119 01	.98144968-02
.37785000 04	.22907546 07	-.12510436 05	.86688782-02	.35601642 01	.88674565-02
.41135000 04	.11499543 05	-.11440931 04	.90939888-02	.67657956 01	.10588028-01
.41340000 04	.31890741-04	-.53857980-02	.90979014-02	.69768251 01	.91032872-02

TRW SYSTEMS
06/03/68

VOYAGER STAGE 1 MODES

MODE 4

75 PERCENT FUEL EXPENDED

OMEGA OMEGA SQUARED TOTAL MASS GENERALIZED MASS INTG. PHI SQ DM ACCELERATION

.50799990 02 .25806390 04 .72860925 04 .72860924 04 .72860924 04 .00000000 00

STATION IN M/Q LB IN/IN V/Q LB/IN B. SLOPE 1/IN Y/Q EQ. PHI PHI PR. 1/IN

.11550000 03	-.00000000 00	-.00000000 00	-.29365849-02	.14729133 01	-.29365849-02
.00000000 00	.94217512 07	.16890878 06	-.29332947-02	.11247274 01	-.30964916-02
.10000000 03	.38151659 08	.50632953 06	-.29135456-02	.80441008 00	-.34027529-02
.23500000 03	.14685455 09	.92621942 06	-.28026457-02	.31199160 00	-.36975437-02
.36000000 03	.26757739 09	.95922818 06	-.25011344-02	-.16674400 00	-.38264928-02
.60000000 03	.40956632 09	.32310809 05	-.11361209-02	-.84523202 00	-.11994754-02
.77500000 03	.36251067 09	-.36906282 06	.15411700-03	-.83644739 00	.87778957-03
.91000000 03	.28030671 09	-.98339518 06	.99144245-03	-.59560103 00	.29196683-02
.11600000 04	-.75061928 08	-.15371431 07	.13431778-02	.19223576 00	.35059922-02
.14000000 04	-.32476823 09	-.30952304 06	.55628651-03	.80931589 00	.10515234-02
.15410000 04	-.35019111 09	-.13382371 06	-.39910748-03	.87418446 00	-.12030809-03
.16200000 04	-.35802540 09	-.53433585 05	-.91792834-03	.83744460 00	-.81417379-03
.16800000 04	-.35856191 09	.44891469 05	-.13165596-02	.77145509 00	-.14037275-02
.17900000 04	-.33186723 09	.74177105 06	-.20052956-02	.54017697 00	-.32313635-02
.19100000 04	-.15663705 09	.17746854 07	-.25525046-02	-.96571352-01	-.66322411-02
.19800000 04	-.37270739 08	.16616768 07	-.27007985-02	-.55591124 00	-.65207450-02
.23900000 04	.39102584 09	.14345545 06	-.62836868-03	-.23584349 01	-.95815132-03
.24700000 04	.38504054 09	-.29851002 06	.43189227-03	-.23437662 01	.14792959-02
.25190000 04	.36924233 09	-.34599852 06	.10586522-02	-.22517085 01	.22726820-02
.26460000 04	.31806300 09	-.45602907 06	.29293331-02	-.18079148 01	.48516043-02
.28100000 04	.20464407 09	-.12140880 07	.68749007-02	-.47698523 00	.12945341-01
.28900000 04	.10221502 09	-.12592228 07	.81648442-02	.61686861 00	.14021694-01
.32225000 04	-.18275905 09	-.19241361 06	.42446423-02	.46592224 01	.58089805-02
.32585000 04	-.18749129 09	-.69711405 05	.15735547-02	.48414066 01	.26800849-02
.33700000 04	-.18951452 09	.12631018 06	-.69053573-02	.45778153 01	-.89102807-02
.35580000 04	-.11270905 09	.55017513 06	-.18796042-01	.84898244 00	-.27528981-01
.36700000 04	-.33178340 08	.46844117 06	-.22479966-01	-.24923742 01	-.29915940-01
.37785000 04	-.19811674 08	.99728436 05	-.23918913-01	-.54921550 01	-.25501904-01
.41135000 04	-.10997397 06	.10906385 05	-.27784348-01	-.16227003 02	-.42026687-01
.41340000 04	.14383919-02	.65106899-02	-.27823161-01	-.17031867 02	-.27829674-01

TRW SYSTEMS
08/03/68

VOYAGER STAGE 1 MODES

MODE 5

75 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.57153806 02	.32665575 04	.72860925 04	.72860924 04	.72860924 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	V/Q EQ. PHI	PHI PR. 1/IN
.11550000 03	-.00000000 00	-.00000000 00	-.62408086-02	.30183828 01	-.62408086-02
.00000000 00	.24349269 08	.43553608 06	-.62322966-02	.22742836 01	-.66531043-02
.10000000 03	.97925671 08	.12854775 07	-.61814334-02	.15819529 01	-.74234407-02
.23500000 03	.37014005 09	.22971285 07	-.59001823-02	.49955651 00	-.81196300-02
.36000000 03	.66200765 09	.22261515 07	-.51473732-02	-.54619891 00	-.82232301-02
.60000000 03	.91561422 09	-.57127466 06	-.19262033-02	-.18192587 01	-.80605695-03
.77500000 03	.67665424 09	-.16146110 07	.74262598-03	-.14422892 01	.39085299-02
.91000000 03	.39651978 09	-.27231198 07	.21438333-02	-.69014586 00	.74832839-02
.11600000 04	-.35103478 09	-.24482454 07	.21729998-02	.88993916 00	.56177673-02
.14000000 04	-.52361214 09	.12856984 07	.39118361-03	.14583745 01	-.16659338-02
.15410000 04	-.30323975 09	.16437752 07	-.78179516-03	.96437948 00	-.42063267-02
.16200000 04	-.17002707 09	.17358340 07	-.11288910-02	.62895484 00	-.44994424-02
.16800000 04	-.63684677 08	.18094967 07	-.12591291-02	.35023358 00	-.47727148-02
.17900000 04	.13711531 09	.17624527 07	-.11930460-02	-.16221323 00	-.41061909-02
.19100000 04	.25594385 09	-.84228599 05	-.70631026-03	-.50097097 00	-.51268130-03
.19800000 04	.23192354 09	-.42619364 06	-.32880600-03	-.48175737 00	.65094946-03
.23900000 04	-.14000151 08	-.62770007 06	.71887653-03	.24111895 00	.21618652-02
.24700000 04	-.61310077 08	-.54542860 06	.61527972-03	.45378514 00	.25290643-02
.25190000 04	-.87719575 08	-.53198880 06	.49141827-03	.57374317 00	.23580456-02
.26460000 04	-.15239943 09	-.48348157 06	-.18126372-03	.84871317 00	.18567263-02
.28100000 04	-.19132299 09	.46389391 06	-.29644279-02	.80322090 00	-.52838974-02
.28900000 04	-.13096635 09	.88219830 06	-.43358105-02	.22168335 00	-.84390583-02
.32225000 04	.10119693 09	.27654479 06	-.35156866-02	-.26773397 01	-.57640183-02
.32585000 04	.10952983 09	.18512305 06	-.19945171-02	-.29126200 01	-.49329781-02
.33700000 04	.12548400 09	.22011728 05	.33056180-02	-.30998000 01	.29562255-02
.35580000 04	.81530142 08	-.36927143 06	.11582615-01	-.94818063 00	.17444066-01
.36700000 04	.40587753 08	-.33568228 06	.14306966-01	.11686462 01	.19635256-01
.37785000 04	.15980149 08	-.78871640 05	.15433444-01	.31822498 01	.16685375-01
.41135000 04	.91019243 05	-.90187788 04	.18590800-01	.10571842 02	.30368168-01
.41340000 04	.73690986-03	-.98871138-02	.18623234-01	.11147660 02	.18633120-01

TRA END2

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SATURN II/VOYAGER

06/03/68

VOYAGER STAGE 1 MODES

MODE 1

100 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.94172543 01	.88684679 02	.42813976 04	.42813975 04	.42813975 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	.00000000 00	.00000000 00	-.16149706-02	.17825953 01	-.16149706-02
.00000000 00	.41176599 06	.75872662 04	-.16148287-02	.15956723 01	-.16221594-02
.10000000 03	.17935783 07	.26099003 05	-.16139309-02	.14328888 01	-.16391473-02
.23500000 03	.79218257 07	.55002970 05	-.16081945-02	.12093870 01	-.16613375-02
.36000000 03	.15331522 08	.61884914 05	-.15913088-02	.10003664 01	-.16768147-02
.60000000 03	.30614052 08	.65194909 05	-.15031529-02	.60219147 00	-.16309860-02
.77500000 03	.42219968 08	.67240739 05	-.13830065-02	.32633685 00	-.15148511-02
.91000000 03	.51357208 08	.68013837 05	-.12638501-02	.12949601 00	-.13972106-02
.11600000 04	.68382307 08	.67980356 05	-.10730875-02	-.18678993 00	-.11687382-02
.14000000 04	.84624606 08	.67279425 05	-.80798543-03	-.43868386 00	-.91563251-03
.15410000 04	.94001298 08	.65660671 05	-.55606924-03	-.55469520 00	-.69286230-03
.16200000 04	.99126001 08	.63781329 05	-.41478224-03	-.60304395 00	-.53862947-03
.16800000 04	.10288389 09	.61176217 05	-.30254058-03	-.63188140 00	-.42132935-03
.17900000 04	.10886854 09	.35706433 05	-.95012981-04	-.66476198 00	-.15403188-03
.19100000 04	.10773548 09	-.55343033 05	.14625632-03	-.65966160 00	.27348168-03
.19800000 04	.10321832 09	-.67469624 05	.30860710-03	-.63331629 00	.46370968-03
.23900000 04	.72072161 08	-.82502661 05	.11030603-02	-.26271035 00	.12927216-02
.24700000 04	.65415087 08	-.83814699 05	.12895074-02	-.14452859 00	.15835940-02
.25190000 04	.61306112 08	-.83889067 05	.13947509-02	-.64318940-01	.16890985-02
.26460000 04	.50653446 08	-.83797098 05	.16979262-02	.17200512 00	.20511509-02
.28100000 04	.37373547 08	-.71035237 05	.23368559-02	.56172012 00	.26920321-02
.28900000 04	.32275150 08	-.59119056 05	.26269111-02	.78504016 00	.29018834-02
.32225000 04	.15063102 08	-.41976955 05	.35766879-02	.19138920 01	.39179639-02
.32585000 04	.13583245 08	-.40214228 05	.37828654-02	.20704996 01	.44211864-02
.33700000 04	.91963940 07	-.36730946 05	.42895984-02	.25919991 01	.48726292-02
.35580000 04	.36797947 07	-.24363528 05	.47573225-02	.35364217 01	.51440451-02
.36700000 04	.12799771 07	-.15723068 05	.48645337-02	.41143552 01	.51141062-02
.37785000 04	.31216987 06	-.18291354 04	.48936311-02	.46594771 01	.49226650-02
.41135000 04	.14425849 04	-.14387275 03	.49491662-02	.63384893 01	.51370456-02
.41340000 04	-.85000767-06	-.51914301-03	.49496431-02	.64430322 01	.49501622-02

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VOYAGER STAGE 1 MODELS

MODE 2

100 PERCENT FUEL EXPENDED

OMEGA	CMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.19285793 02	.37194181 03	.42813976 04	.42813975 04	.42813975 04	.00000000 00
STATION IN	M/O LB IN/IN	V/O LB/IN	B. SLOPE 1/IN	Y/O EQ. PHI	PHI PR. 1/IN
-.11500000 03	.00000000 00	.00000000 00	-.12393563-02	.83610234 00	-.12393563-02
.00000000 00	.78962300 06	.14353384 05	-.12390824-02	.69220143 00	-.12529504-02
.10000000 03	.33173812 07	.46086210 05	-.12373938-02	.56591629 00	-.12819215-02
.23500000 04	.13706707 08	.91242707 05	-.12272710-02	.38936541 00	-.13154282-02
.36000000 03	.25781247 08	.99547979 05	-.11985714-02	.22301168 00	-.13361161-02
.60000000 00	.49916677 08	.10767588 06	-.11531190-02	-.89574834-01	-.12505226-02
.77500000 03	.67275453 08	.97084538 05	-.85946803-03	-.29179927 00	-.10498299-02
.91000000 03	.80056420 08	.91955919 05	-.67168132-03	-.42057886 00	-.85198704-03
.11600000 04	.10181079 09	.83008845 05	-.38147995-03	-.58319082 00	-.49827631-03
.14000000 04	.12104895 09	.77190786 05	.48161867-05	-.65955081 00	-.11868907-03
.15410000 04	.13129820 09	.68197768 05	.35092386-03	-.65545832 00	.21884518-03
.16200000 04	.13639083 09	.59526217 05	.55681702-03	-.62914473 00	.44123214-03
.16800000 04	.13967092 09	.48726709 05	.71024252-03	-.59752031 00	.61562755-03
.17900000 04	.14240121 09	-.38360333 05	.98775687-03	-.50915272 00	.10511624-02
.19100000 04	.12220939 09	-.28405152 06	.12838053-02	-.33095020 00	.19367973-02
.19800000 04	.10105704 09	-.37710444 06	.14556928-02	-.18625129 00	.21616800-02
.23900000 04	-.21260711 08	-.26758041 06	.18031157-02	.80092964 00	.24182431-02
.24700000 04	-.41742097 08	-.24317952 06	.17172477-02	.10107569 01	.25705091-02
.25190000 04	-.53581196 08	-.23998769 06	.16380592-02	.11345829 01	.24801213-02
.26460000 04	-.83453612 08	-.23075544 06	.12567639-02	.14367672 01	.22265024-02
.28100000 04	-.11326876 09	-.35872202 05	-.27056383-03	.16788777 01	-.91202821-04
.28900000 04	-.10953925 09	.03464428 05	-.12065350-02	.16013555 01	-.16412533-02
.32225000 04	-.66591400 08	.15372077 06	-.49511073-02	.35290159 00	-.62008697-02
.32585000 04	-.61040069 08	.15451017 06	-.58700875-02	.67598813-01	-.83226298-02
.33700000 04	-.43900088 08	.15032915 06	-.82088507-02	-.99647993 00	-.10595028-01
.35580000 04	-.18936064 08	.11852242 06	-.10527328-01	-.31832718 01	-.12408636-01
.36700000 04	-.70692872 07	.80547964 05	-.11092947-01	-.45873891 01	-.12371486-01
.37785000 04	-.19515406 07	.10922187 05	-.11261375-01	-.58833488 01	-.11434743-01
.41135000 04	-.95193691 04	.94790083 03	-.11618281-01	-.99096373 01	-.12856118-01
.41340000 04	-.15947386-05	-.82076090-03	-.11621488-01	-.10168174 02	-.11620667-01

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VOYAGER STAGE 1 MODES

MODE 3

100 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.47668714 02	.22723064 04	.42813976 04	.42813975 04	.42813975 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.38442411-02	.14437259 01	-.38442411-02
.00000000 03	.78847582 07	.13888013 06	-.38414649-02	.99217681 00	-.39756486-02
.10000000 03	.30332118 08	.36904069 06	-.38253566-02	.58697690 00	-.41819176-02
.23500000 03	.10249564 09	.57998176 06	-.37445399-02	.52578618-02	-.43049087-02
.36000000 03	.17330195 09	.54771131 06	-.35434273-02	-.53634338 00	-.43001959-02
.60000000 03	.29369734 09	.43869005 06	-.26404947-02	-.14897605 01	-.35006712-02
.77500000 03	.35386970 09	.23975425 06	-.15618006-02	-.19783493 01	-.20319069-02
.91000000 03	.37410695 09	.57314523 05	-.62942890-03	-.21665184 01	-.74181031-03
.11600000 04	.35349067 09	-.18456122 06	.54178190-03	-.21508465 01	.80146603-03
.14000000 04	.29522777 09	-.29762637 06	.16686056-02	-.17967050 01	.21448078-02
.15410000 04	.24345423 09	-.43122984 06	.24325776-02	-.13979929 01	.33309731-02
.16200000 04	.20578328 09	-.53373764 06	.27621877-02	-.11192842 01	.37985715-02
.16800000 04	.17078046 09	-.64017842 06	.29719619-02	-.87909903 00	.42150268-02
.17900000 04	.83029678 08	-.11533349 07	.32322080-02	-.37449034 00	.51385466-02
.19100000 04	-.84920455 08	-.12290966 07	.32165640-02	.35401379 00	.60420733-02
.19800000 04	-.16042651 09	-.10139533 07	.30263359-02	.74676529 00	.53572631-02
.23900000 04	-.35478741 09	.23039095 06	.31216341-03	.19398765 01	-.21747096-03
.24700000 04	-.32393261 09	.54183272 06	-.61375080-03	.18220106 01	-.25149182-02
.25190000 04	-.29659108 09	.57372844 06	-.11293169-02	.16831849 01	-.31423992-02
.26460000 04	-.21915335 09	.64163208 06	-.25234371-02	.11561498 01	-.52280691-02
.28100000 04	-.98644737 08	.88101215 06	-.48316782-02	-.21014759-01	-.92367387-02
.28900000 04	-.33374473 08	.74383184 06	-.53798046-02	-.74336973 00	-.88394874-02
.32250000 04	.12207353 09	.57004713 05	-.21503694-02	-.30860823 01	-.26138223-02
.32585000 04	.12285448 09	-.13837999 05	-.38383588-03	-.31446003 01	-.16418510-03
.33700000 04	.11812502 09	-.12138013 06	.50294407-02	-.28088525 01	.69561094-02
.35580000 04	.67553603 08	-.34049175 06	.12281039-01	-.31770666 00	.17685670-01
.36700000 04	.31089217 08	-.28179876 06	.14466900-01	.17742876 01	.18939896-01
.37785000 04	.11275075 08	-.57300999 05	.15297990-01	.37112728 01	.16207529-01
.41135000 04	.61819301 05	-.61333450 04	.17484589-01	.10377229 02	.25493950-01
.41340000 04	.35247215-03	.51757644-01	.17506306-01	.10867913 02	.17454548-01

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VOYAGER STAGE 1 MODES

MODE 4

PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
.58195429 02	.33867079 04	.42813976 04	.42813975 04	.42813975 04	.00000000 00	
STATION IN	M/O LB IN/IN	V/O	LB/IN	R. SLOPE 1/IN	Y/J EQ. PHI	PHI PR. 1/IN
-.11550000 03	.00000000 00	.00000000 00	-.54281314-02	.18836043 01	-.54281314-02	
.00000000 00	.15166118 08	.26532998 06	-.54227750-02	.12421543 01	-.56791324-02	
.10000000 03	.57178790 08	.67136146 06	-.53921023-02	.66049859 00	-.60407606-02	
.23500000 03	.18243125 09	.97245454 06	-.52452810-02	-.18 32546 00	-.61848506-02	
.36000000 03	.29705127 09	.85984178 06	-.48952265-02	-.05324740 00	-.60832635-02	
.60000000 03	.47652458 09	.60113916 06	-.33958374-02	-.22631947 01	-.45745416-02	
.77500000 03	.54485753 09	.16339810 06	-.16884677-02	-.28453568 01	-.20088561-02	
.91000000 03	.54130821 09	-.21973131 06	-.29418423-03	-.29721246 01	.13470070-03	
.11600000 04	.41692243 09	-.69524882 06	.12555597-02	-.26810207 01	.22337992-02	
.14000000 04	.22511652 09	-.89280442 06	.23716663-02	-.19470756 01	.38001533-02	
.15410000 04	.84090943 08	-.13938493 07	.28143139-02	-.12829340 01	.50931665-02	
.16200000 04	-.70090409 07	-.12235873 07	.28719800-02	-.88054906 00	.52478776-02	
.16800000 04	-.83710258 08	-.13365819 07	.28221899-02	-.56036379 00	.54174945-02	
.17900000 04	-.23998948 09	-.15238349 07	.25139802-02	.25668717-01	.50327155-02	
.19100000 04	-.35515852 09	.35786982 05	.18104863-02	.50657728 00	.17282174-02	
.19800000 04	-.33316235 09	.40823730 06	.12785591-02	.56392191 00	.34008253-03	
.23900000 04	-.49579629 08	.84868846 06	-.58901446-03	-.35562023-01	-.25400224-02	
.24700000 04	.17122614 08	.90691075 06	-.63227212-03	-.30239827 00	-.34635379-02	
.25190000 04	.56418546 08	.79624971 06	-.57112327-03	-.47702825 00	-.33649819-02	
.26460000 04	.15478065 09	.74783174 06	.30193163-04	-.89757602 00	-.31220958-02	
.28100000 04	.22794733 09	-.44019128 06	.31817597-02	-.10175548 01	.53827161-02	
.28900000 04	.16123754 09	-.10154589 07	.48411648-02	-.37682249 00	.95642292-02	
.32225000 04	-.11341884 09	-.34866085 06	.42119514-02	.31113472 01	.70365924-02	
.32585000 04	-.12407212 09	-.24153881 06	.24874037-02	.33057265 01	.63213531-02	
.33700000 04	-.14541942 09	-.46517098 05	-.35931259-02	.35922796 01	-.28547498-02	
.35580000 04	-.95899595 08	.42872221 06	-.13266955-01	.11598581 01	-.20072070-01	
.36700000 04	-.48161443 08	.39414993 06	-.16483195-01	-.12838652 01	-.22739543-01	
.37785000 04	-.19128604 08	.94112993 05	-.17825314-01	-.36172534 01	-.19319171-01	
.41135000 04	-.10941308 06	.10839809 05	-.21612506-01	-.12250072 02	-.35767906-01	
.41340000 04	-.45986432-03	-.46076249-03	-.21651555-01	-.12927171 02	-.21651095-01	

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VOYAGER STAGE 1 MODES

MODE 5

100 PERCENT FUEL EXPENDED

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.72364360 02	.52366005 04	.42813976 04	.42813975 04	.42813975 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	V/Q EQ. PHI	PHI PR. 1/IN
-.11550000 03	-.00000000 00	-.00000000 00	-.48106050-02	.15740115 01	-.48106050-02
.00000000 00	.19416011 08	.33762916 06	-.48037290-02	.99982344 00	-.51299407-02
.10000000 03	.71826970 08	.81332726 06	-.47648245-02	.47035713 00	-.55506479-02
.23500000 03	.21560010 09	.10684891 07	-.45873175-02	-.30187107 00	-.56196741-02
.36000000 03	.33566652 09	.86124306 06	-.41842898-02	-.99549056 00	-.53742629-02
.60000000 03	.50138808 09	.47473378 06	-.25569400-02	-.20953137 01	-.34877905-02
.77500000 03	.53287920 09	-.13047176 06	-.82019821-03	-.24540852 01	-.56437124-03
.91000000 03	.48190260 09	-.62207710 06	.48631403-03	-.23752060 01	.17060730-02
.11600000 04	.24393454 09	-.11729061 07	.16679893-02	-.17757261 01	.33183094-02
.14000000 04	-.60810836 08	-.13466658 07	.19850459-02	-.85948321 00	.41397112-02
.15410000 04	-.25924174 09	-.14466164 07	.15370792-02	-.19119517 00	.45508633-02
.16200000 04	-.37390884 09	-.14464230 07	.10739893-02	.13569869 00	.38833543-02
.16800000 04	-.45928018 09	-.13825820 07	.61076719-03	.35248561 00	.32953923-02
.17900000 04	-.57579613 09	-.10950715 06	-.42024324-03	.58530142 00	-.23923968-03
.19100000 04	-.35812789 09	.29882625 07	-.15032183-02	.10580188-02	-.83727870-02
.19800000 04	-.15434330 09	.28315237 07	-.18960668-02	-.58821344 00	-.84053163-02
.23900000 04	.41707699 09	-.63327067 06	.39736739-03	-.23924819 01	.18531620-02
.24700000 04	.33202384 09	-.14809082 07	.14283542-02	-.20278003 01	.66245232-02
.25190000 04	.25749331 09	-.15587578 07	.19184801-02	-.16837871 01	.73878054-02
.26460000 04	.50272253 08	-.16846864 07	.27190969-02	-.58476641 00	.98204513-02
.28100000 04	-.19600268 09	-.61209746 06	.12214531-02	.96287574 00	.42819404-02
.28900000 04	-.18881100 09	.49600381 06	-.44494052-03	.96105602 00	-.27519350-02
.32225000 04	.31725143 08	.55260911 06	-.32105567-02	-.11699644 01	-.77033137-02
.32585000 04	.50383723 08	.48043444 06	-.26162656-02	-.15792728 01	-.10242209-01
.33700000 04	.98746967 08	.28796907 06	.77828652-03	-.24699588 01	-.37926511-02
.35580000 04	.83606281 08	-.29428603 06	.83869947-02	-.13467348 01	.13058201-01
.36700000 04	.48064251 08	-.33127412 06	.11358354-01	.33792615 00	.16616673-01
.37785000 04	.21643405 08	-.10171944 06	.12780302-01	.20771112 01	.14394897-01
.41135000 04	.13164131 06	-.13014493 05	.17195100-01	.94478782 01	.34190359-01
.41340000 04	.30742412-02	-.41640357-02	.17243165-01	.10081779 02	.17247328-01

TRA END2

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SATURN II / VOYAGER

TRW SYSTEMS
06/06/68

VOYAGER STAGE 2 MODES

MODE 1

STARTBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.16862011 02	.28432741 03	.35359057 04	.35359057 04	.35359057 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	-.00000000 00	-.00000000 00	-.20014250-02	.83502167 00	-.20014250-02
.16200000 04	.26956363 06	.76874313 04	-.20013024-02	.67638793 00	-.20162294-02
.16640000 04	.72593325 06	.13171745 05	-.20009126-02	.58745169 00	-.20264888-02
.16800000 04	.95870021 06	.15898301 05	-.20006641-02	.55498701 00	-.20315345-02
.17900000 04	.42543018 07	.64299926 05	-.19965068-02	.32914265 00	-.21027877-02
.19100000 04	.18227248 08	.15049726 06	-.19723148-02	.61727087-01	-.23182855-02
.19800000 04	.28874517 08	.15180953 06	-.19360861-02	-.99639021-01	-.22850735-02
.23900000 04	.82881070 08	.97594762 05	-.14157420-02	-.92772151 00	-.16400977-02
.24700000 04	.89899579 08	.77155573 05	-.11810937-02	-.10551814 01	-.14518150-02
.25190000 04	.93620132 08	.74678295 05	-.10286622-02	-.11224002 01	-.12906913-02
.26460000 04	.10266547 09	.67635296 05	-.49051667-03	-.12568827 01	-.77561557-03
.28100000 04	.10894837 09	-.47773657 05	.11100166-02	-.12525827 01	.13488849-02
.28900000 04	.10144449 09	-.11931707 06	.19914076-02	-.10918764 01	.25463707-02
.32225000 04	.56819018 08	-.13913543 06	.52970908-02	.36141105 00	.64282731-02
.32585000 04	.51833373 08	-.13770964 06	.60793261-02	.64748871 00	.82651933-02
.33700000 04	.36638579 08	-.13134038 06	.80500230-02	.16827015 01	.10134791-01
.35580000 04	.15479959 08	-.98399330 05	.99647836-02	.37367801 01	.11526678-01
.36700000 04	.56726649 07	-.65926727 05	.10424103-01	.50383864 01	.11470559-01
.37785000 04	.15190946 07	-.85960787 04	.10557662-01	.62442136 01	.10694108-01
.41135000 04	.73156365 04	-.72873392 03	.10833582-01	.99773871 01	.11785215-01
.41340000 04	.19908468-06	.28271288-03	.10836036-01	.10215123 02	.10835753-01

TRW SYSTEMS

06/06/68

VOYAGER STAGE 2 MODES

MODE 2

STARTBURN

OMEGA OMEGA SQUARED TOTAL MASS GENERALIZED MASS INTG. PHI SQ OM ACCELERATION

.46491196 02 .21614313 04 .35359057 04 .35359057 04 .35359057 04 .00000000 00

STATION IN M/Q LB IN/IN V/Q LB/IN B.SLOPE 1/IN Y/Q EQ. PHI PHI PR. 1/IN

.15410000 04 -.00000000 00 -.00000000 00 -.45768578-02 .17131247 01 -.45768578-02

.16200000 04 .41621755 07 .11801001 06 -.45749591-02 .13435063 01 -.48041048-02

.16640000 04 .11121087 08 .19953366 06 -.45689676-02 .11288067 01 -.49564116-02

.16800000 04 .14633594 08 .23904663 06 -.45651677-02 .10489119 01 -.50293359-02

.17900000 04 .60845452 08 .83306990 06 -.45033156-02 .46571559 00 -.58802906-02

.19100000 04 .20102291 09 .10639648 07 -.42062511-02 -.34508448 00 -.66521472-02

.19800000 04 .26553814 09 .85886279 06 -.38459189-02 -.77579579 00 -.58203161-02

.23900000 04 .39701856 09 .37815359 06 -.46950973-03 -.20052340 01 .39980886-03

.24700000 04 .35460012 09 -.68241664 06 .55514099-03 -.18570085 01 .29495853-02

.25190000 04 .32039687 09 -.71317067 06 .11159400-02 -.16958237 01 .36182931-02

.26460000 04 .22549963 09 -.77681551 06 .25881785-02 -.10979049 01 .58626409-02

.28100000 04 .87047733 08 -.91227700 06 .48199206-02 .17207567 00 .93813055-02

.28900000 04 .22503417 08 -.71358254 06 .52709735-02 .88620973 00 .85899619-02

.32225000 04 -.12188284 09 -.34742787 05 .18560983-02 .30885015 01 .21385600-02

.32585000 04 -.12192646 09 .32447580 05 .97776767-04 .31245416 01 -.41726419-03

.33700000 04 -.11533206 09 .13251130 06 -.52298361-02 .27312794 01 -.73331900-02

.35580000 04 -.65080951 08 .33156106 06 -.12258389-01 .22893803 00 -.17521263-01

.36700000 04 -.29692775 08 .27177496 06 -.14357036-01 -.18381731 01 -.18670924-01

.37785000 04 -.10663252 08 .54377771 05 -.15147322-01 -.37483902 01 -.16010461-01

.41135000 04 -.58201058 05 .57751775 04 -.17209705-01 -.10277213 02 -.24751347-01

.41340000 04 .13070104-04 -.95105431-03 -.17230118-01 -.10754536 02 -.17229167-01

TRW SYSTEMS
06/06/68

VOYAGER STAGE 2 MODES

MODE 3

STARTBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.62768196 02	.39398464 04	.35359057 04	.35359057 04	.35359057 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	-.00000000 00	-.00000000 00	-.43347277-02	.16738041 01	-.43347277-02
.16200000 04	.74271384 07	.21070108 06	-.43313409-02	.13170017 01	-.47404692-02
.16640000 04	.19852004 08	.35616546 06	-.43206463-02	.11024951 01	-.50122298-02
.16800000 04	.26119767 08	.42640946 06	-.43138634-02	.10212461 01	-.51418430-02
.17900000 04	.10727608 09	.14289826 07	-.42038767-02	.40436188 00	-.65658314-02
.19100000 04	.31705059 09	.11591478 07	-.37094328-02	-.49622101 00	-.63741404-02
.19800000 04	.37373240 09	.67007391 06	-.31747105-02	-.86796670 00	-.47151103-02
.23900000 04	.28651186 09	-.11765028 07	.39282195-03	-.12119168 01	.30974261-02
.24700000 04	.18013381 09	-.14665017 07	.10308198-02	-.79427425 00	.61764397-02
.25190000 04	.10774117 09	-.14866704 07	.12700389-02	-.48340316 00	.64864262-02
.26460000 04	-.82074481 08	-.14902416 07	.12976810-02	.41943422 00	.75794042-02
.28100000 04	-.26844746 09	.40492091 05	-.17772858-02	.13195443 01	-.19797463-02
.28900000 04	-.21354364 09	.10189316 07	-.38449559-02	.83222353 00	-.85841727-02
.32225000 04	.98255625 08	.50471199 06	-.47274321-02	-.27300643 01	-.88307815-02
.32585000 04	.11438918 09	.38895142 06	-.31914055-02	-.31359585 01	-.93652374-02
.33700000 04	.15121744 09	.15682544 06	.28156569-02	-.37573534 01	.32636417-03
.35580000 04	.10719167 09	-.44901668 06	.13305079-01	-.14873242 01	.20432328-01
.36700000 04	.56096518 08	-.43644012 06	.16963489-01	.10402132 01	.23891110-01
.37785000 04	.23177792 08	-.11240257 06	.18556246-01	.35027901 01	.20340414-01
.41135000 04	.13512485 06	-.13378389 05	.23185562-01	.12969242 02	.40656022-01
.41340000 04	.12770112-04	.12070998-02	.23234134-01	.13733541 02	.23232927-01

06/06/68

VOYAGER STAGE 2 MODES

MODE 4

STARTBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ OM	ACCELERATION
.97449729 02	.94964496 04	.35359057 04	.35359056 04	.35359056 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	.00000000 00	.00000000 00	-.49156331-02	.23260882 01	-.49156331-02
.16200000 04	.25213437 08	.71927951 06	-.49041692-02	.18890072 01	-.63008284-02
.16640000 04	.67797862 08	.12242332 07	-.48677299-02	.15912105 01	-.72448818-02
.16800000 04	.89364905 08	.14684712 07	-.48445430-02	.14716261 01	-.76959434-02
.17900000 04	.36443125 09	.46676721 07	-.44678646-02	.45583360 00	-.12183025-01
.19100000 04	.84963419 09	-.14386613 06	-.29675072-02	-.93464684 00	-.26367805-02
.19800000 04	.74088808 09	-.19985971 07	-.17320006-02	-.84811860 00	.28624754-02
.23900000 04	-.19058446 09	-.12006696 07	.50425716-03	.13458370 01	.32644170-02
.24700000 04	-.24774005 09	-.19043182 06	-.10836987-03	.15494050 01	.55981197-03
.25190000 04	-.25417748 09	-.72232322 05	-.52601680-03	.15564935 01	-.27257005-03
.26460000 04	-.24434289 09	.22101627 06	-.19012345-02	.13689763 01	-.28328707-02
.28100000 04	-.10191302 09	.21251729 07	-.47941065-02	.12488522 00	-.15419971-01
.28900000 04	.48405965 08	.15094111 07	-.49909540-02	-.98928077 00	-.12011471-01
.32225000 04	.11151161 09	-.13285336 07	.21953404-02	-.16422230 01	.12996427-01
.32585000 04	.61396895 08	-.14411998 07	.34450987-02	-.72377147 00	.26321286-01
.33700000 04	-.95134378 08	-.12197439 07	.26195196-02	.21644963 01	.21980533-01
.35580000 04	-.17058409 09	.16328212 06	-.92534165-02	.28216913 01	-.11845196-01
.36700000 04	-.13449299 09	.55377964 06	-.16278433-01	.80441898 00	-.25068586-01
.37785000 04	-.77397885 08	.33102363 06	-.20788891-01	-.21357351 01	-.26043234-01
.41135000 04	-.53440873 06	.52600622 05	-.37574088-01	-.20754136 02	-.10626375 00
.41340000 04	-.70986580-04	.11014427-01	-.37778173-01	-.22663439 02	-.37789187-01

TRW SYSTEMS
06/06/68

VOYAGER STAGE 2 MODES

MODE 5

STARTBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.10602139 03	.11240535 05	.35359057 04	.35359057 04	.35359057 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	-.00000000 00	-.00000000 00	-.45516678-02	.22899521 01	-.45516678-02
.16200000 04	.29479405 08	.84206235 06	-.45382736-02	.18733764 01	-.61733460-02
.16640000 04	.79370887 08	.14349306 07	-.44956342-02	.15776053 01	-.72819072-02
.16800000 04	.10465160 09	.17213610 07	-.44684846-02	.14567936 01	-.78109331-02
.17900000 04	.42415105 09	.53311299 07	-.40279385-02	.40418331 00	-.12839723-01
.19100000 04	.90909732 09	-.12834988 07	-.23514837-02	-.90386997 00	.59908819-03
.19800000 04	.71113770 09	-.32647922 07	-.10926160-02	-.56750929 00	.64126533-02
.23900000 04	-.27417292 09	.15809917 06	-.24565205-03	.17488628 01	-.60909840-03
.24700000 04	-.20722972 09	.14948979 07	-.92263785-03	.14689760 01	-.61678936-02
.25190000 04	-.13097351 09	.16128144 07	-.12043162-02	.11487834 01	-.68633141-02
.26460000 04	.86195659 08	.17680305 07	-.12866362-02	.14331868 00	-.87393057-02
.28100000 04	.27949840 09	-.89281488 06	.21300953-02	-.75636302 00	.65941696-02
.28900000 04	.14130442 09	-.19952668 07	.39532989-02	.14813182 00	.13233609-01
.32225000 04	-.13161135 09	.10329938 07	-.49677082-03	.23205380 01	-.88947688-02
.32585000 04	-.90200804 08	.12542172 07	-.21032876-02	.15990029 01	-.22011496-01
.33700000 04	.50421557 08	.11984272 07	-.29781045-02	-.97491344 00	-.22000759-01
.35580000 04	.15798474 09	.83978511 05	.64248591-02	-.24819332 01	.50918669-02
.36700000 04	.14576286 09	-.41788292 06	.13468609-01	-.11694771 01	.20101672-01
.37785000 04	.92842348 08	-.38164058 06	.18632753-01	.14334103 01	.24690540-01
.41135000 04	.67455060 06	-.66278533 05	.39280882-01	.21964622 02	.12583214 00
.41340000 04	.34941896 04	.50307458 03	.39542848-01	.24205137 02	.39542344-01
TRA	END2			995	

SATURN II/VOYAGER

TRW
06/06/68

VOYAGER STAGE 2 MODES

MODE 1

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.16881192 02	.28497465 03	.25755431 04	.25755431 04	.25755431 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	-.00000000 00	-.00000000 00	-.17499640-02	.69584262 00	-.17499640-02
.16200000 04	.10898494 07	.38016951 05	-.17495389-02	.55548582 00	-.18233582-02
.16640000 04	.32964397 07	.56606373 05	-.17478056-02	.47425324 00	-.18577208-02
.16800000 04	.42199130 07	.58804074 05	-.17466929-02	.44450374 00	-.18608756-02
.17900000 04	.11408680 08	.79134645 05	-.17319631-02	.23976202 00	-.18627642-02
.19100000 04	.23076142 08	.10722831 06	-.16934323-02	.10138176-01	-.19399341-02
.19800000 04	.30561531 08	.10643128 06	-.16521649-02	-.12423268 00	-.18968345-02
.23900000 04	.69948392 08	.79272742 05	-.11908945-02	-.80981177 00	-.13731307-02
.24700000 04	.75901104 08	.69095305 05	-.99294855-03	-.91720749 00	-.12353882-02
.25190000 04	.79234463 08	.66938466 05	-.86409252-03	-.97442360 00	-.10989643-02
.26460000 04	.87354126 08	.60816831 05	-.40725801-03	-.10891432 01	-.66361545-03
.28100000 04	.93151771 08	-.39413742 05	.95875769-03	-.10857397 01	.11558264-02
.28900000 04	.86798879 08	-.10159619 06	.17126667-02	-.94785190 00	.21852071-02
.32225000 04	.48682209 08	-.11910619 06	.45433835-02	.29846554 00	.55117265-02
.32585000 04	.44413765 08	-.11791345 06	.52136227-02	.54369816 00	.70852647-02
.33700000 04	.31402239 08	-.11249292 06	.69024245-02	.14311070 01	.86880264-02
.35580000 04	.13271784 08	-.84342792 05	.85437921-02	.31921181 01	.98825666-02
.36700000 04	.48649021 07	-.56521250 05	.89376317-02	.43080841 01	.98347944-02
.37785000 04	.13034270 07	-.73743688 04	.90521946-02	.53419669 01	.91692480-02
.41135000 04	.62783027 04	-.62539690 03	.92889665-02	.85429468 01	.10105655-01
.41340000 04	.33180362-06	-.10821386-02	.92910723-02	.87467997 01	.92921544-02

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VOYAGER STAGE 2 MODES

MODE 2

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.47414999 02	.22481821 04	.25755431 04	.25755431 04	.25755431 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	-.00000000 00	-.00000000 00	-.45708716-02	.14987723 01	-.45708716-02
.16200000 04	.18020815 08	.61927026 06	-.45637897-02	.11027917 01	-.57662562-02
.16640000 04	.53420272 08	.90002103 06	-.45354828-02	.83376903 00	-.62830964-02
.16800000 04	.68062214 08	.92958740 06	-.45174970-02	.73290846 00	-.63225210-02
.17900000 04	.17638135 09	.10590038 07	-.42839384-02	.46042271-01	-.60343580-02
.19100000 04	.28258660 09	.50594131 06	-.37547778-02	-.64867798 00	-.49178613-02
.19800000 04	.30884834 09	.32188857 06	-.32985602-02	-.95614843 00	-.40385339-02
.23900000 04	.31726618 09	-.33680682 06	-.27049321-03	-.17104554 01	.50377532-03
.24700000 04	.28423759 09	-.49055683 06	.54788776-03	-.15870599 01	.22691397-02
.25190000 04	.25951856 09	-.51800972 06	.99966776-03	-.14622438 01	.28172457-02
.26460000 04	.18981117 09	-.57610076 06	.22136861-02	-.99237269 00	.46420881-02
.28100000 04	.82827758 08	-.76556539 06	.41874700-02	.42699714-01	.80152968-02
.28900000 04	.26630036 08	-.63664439 06	.46412642-02	.66612693 00	.76024009-02
.32225000 04	-.10554208 09	-.44897230 05	.18105895-02	.26672415 01	.21756076-02
.32585000 04	-.10607192 09	.15633906 05	.28436107-03	.27137338 01	.36203832-04
.33700000 04	-.10161474 09	.10715396 06	-.43806338-02	.24130050 01	-.60814902-02
.35580000 04	-.57941512 08	.29270683 06	-.10609037-01	.25782079 00	-.15255177-01
.36700000 04	-.26615645 08	.24173629 06	-.12482572-01	-.15457592 01	-.16319656-01
.37785000 04	-.96301931 07	.48978017 05	-.13193346-01	-.32150283 01	-.13970775-01
.41135000 04	-.52746486 05	.52333141 04	-.15059108-01	-.89502871 01	-.21893145-01
.41340000 04	.11434725-04	.59906123-02	-.15077632-01	-.93718533 01	-.15083622-01

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VOYAGER STAGE 2 MODES

MODE 3

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.61686209 02	.38051884 04	.25755431 04	.25755431 04	.25755431 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	-.00000000 00	-.00000000 00	-.44647180-02	.15184591 01	-.44647180-02
.16200000 04	.30930936 08	.10604979 07	-.44525522-02	.11058756 01	-.69117714-02
.16640000 04	.91292902 08	.15302762 07	-.44040832-02	.79364825 00	-.72754923-02
.16800000 04	.11616275 09	.15771940 07	-.43733675-02	.67512784 00	-.74358800-02
.17900000 04	.29638070 09	.16686493 07	-.39770540-02	-.12198941 00	-.67351519-02
.19100000 04	.42849721 09	.18398632 06	-.31306888-02	-.80569728 00	-.35536458-02
.19800000 04	.42283167 09	-.18158987 06	-.24733417-02	-.98875937 00	-.20950007-02
.23900000 04	.18222974 09	-.96204021 06	.50077547-03	-.76555701 00	.27129637-02
.24700000 04	.10119388 09	-.10572628 07	.88680790-03	-.43597561 00	.45969072-02
.25190000 04	.49119576 08	-.10670567 07	.10117107-02	-.20639200 00	.47557694-02
.26460000 04	-.86379832 08	-.10582447 07	.87909286-03	.44247811 00	.53396463-02
.28100000 04	-.21396068 09	.12708636 06	-.17034036-02	.10216079 01	-.25306353-02
.28900000 04	-.16580332 09	.84166126 06	-.33297941-02	.58986012 00	-.72466970-02
.32225000 04	.83515557 08	.38242680 06	-.37642226-02	-.22977724 01	-.68733027-02
.32585000 04	.95635221 08	.28893618 06	-.24703116-02	-.28078441 01	-.70950007-02
.33700000 04	.12267783 09	.10602872 06	.24643538-02	-.30491101 01	.70135091-02
.35580000 04	.85476903 08	-.36375889 06	.10889491-01	-.11564034 01	.16663442-01
.36700000 04	.44301370 08	-.34883309 06	.13794813-01	.89680017 00	.19331045-01
.37785000 04	.18135676 08	-.88247913 05	.15047175-01	.28872257 01	.16367013-01
.41135000 04	.10525112 06	-.10422283 05	.18661463-01	.10466291 02	.52271007-01
.41340000 04	.46339695-04	.37968683-02	.18699232-01	.11073966 02	.16709020-01

TPW SYSTEMS
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VOYAGER STAGE 2 MODES

MODE 4

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.95473756 02	.91152380 04	.25755431 04	.25755431 04	.25755431 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	.00000000 00	.00000000 00	-.24285948-02	.11328940 01	-.24285948-02
.16200000 04	.56438409 08	.19345582 07	-.24064163-02	.83179041 00	-.61628399-02
.16640000 04	.16562791 09	.27504012 07	-.23181923-02	.51551653 00	-.76587771-02
.16800000 04	.21021524 09	.28198737 07	-.22625392-02	.39227573 00	-.77380222-02
.17900000 04	.51623757 09	.24087168 07	-.15549341-02	-.39345904 00	-.55362840-02
.19100000 04	.57037340 09	-.17703673 07	-.25396237-03	-.57546282 00	.38158473-02
.19800000 04	.41887981 09	-.22692498 07	.51013831-03	-.21686428 00	.57268043-02
.23900000 04	-.29153463 09	-.54430748 06	.53674741-03	.18579986 01	.17880289-02
.24700000 04	-.30721597 09	.17257689 06	-.28809855-03	.19171614 01	-.89503499-03
.25190000 04	-.29534944 09	.31054422 06	-.78946545-03	.18490436 01	-.18790943-02
.26460000 04	-.23503706 09	.62599862 06	-.22415879-02	.14266530 01	-.48803212-02
.28100000 04	-.46522187 08	.19907645 07	-.45040751-02	-.51225804-01	-.14457897-01
.28900000 04	.79853808 08	.11533911 07	-.43253340-02	-.10126443 01	-.96899438-02
.32225000 04	.88814280 08	-.11800358 07	.22458917-02	-.12213698 01	.11839678-01
.32585000 04	.44774188 08	-.12543387 07	.32109030-02	-.40518844 00	.23121042-01
.33700000 04	-.90650586 08	-.10366859 07	.21147276-02	.20980832 01	.18570058-01
.35580000 04	-.14875160 09	.18329957 06	-.85379853-02	.24796747 01	-.11447502-01
.36700000 04	-.11369670 09	.49745916 06	-.14571704-01	.61481914 00	-.22467881-01
.37785000 04	-.64028771 08	.27616983 06	-.18341270-01	-.19790656 01	-.22724918-01
.41135000 04	-.43721032 06	.43050146 05	-.32151505-01	-.17718864 02	-.88369473-01
.41340000 04	-.86432952-05	.18322486-01	-.32317844-01	-.19310152 02	-.32336166-01

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VOYAGER STAGE 2 MODES

MODE 5

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.10824205 03	.11716341 05	.25755431 04	.25755431 04	.25755431 04	.00000000.00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	R.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	.00000000 00	.00000000 00	-.17795054-02	.99441606 00	-.17795054-02
.16200000 04	.64210778 08	.21988622 07	-.17542729-02	.72954581 00	-.60239082-02
.16640000 04	.18772077 09	.31000536 07	-.16540832-02	.41438164 00	-.76736046-02
.16800000 04	.23790905 09	.31694375 07	-.15910544-02	.29094776 00	-.77453020-02
.17900000 04	.57255201 09	.23825268 07	-.79597135-03	-.47121498 00	-.47340322-02
.19100000 04	.54777015 09	-.27277984 07	.55712947-03	-.38879085 00	.68279303-02
.19800000 04	.33635402 09	-.30564179 07	.12390370-02	.16199508 00	.82652849-02
.23900000 04	-.36128755 09	.50035582 06	-.18193100-04	.22417743 01	-.11684363-02
.24700000 04	-.28033713 09	.15214173 07	-.90669713-03	.19260961 01	-.62450035-02
.25190000 04	-.20161044 09	.16867590 07	-.13080773-02	.15950668 01	-.72265299-02
.26460000 04	.31986904 08	.19471848 07	-.17334830-02	.49159053 00	-.99413309-02
.28100000 04	.27680599 09	-.41851449 06	.12257946-02	-.77296492 00	.33183670-02
.28900000 04	.16398870 09	-.18084525 07	.31471168-02	-.59321687-01	.11558524-01
.32225000 04	-.11796790 09	.82580357 06	-.59463231-04	.21478089 01	-.67733132-02
.32585000 04	-.84100113 08	.10444912 07	-.15237123-02	.15675665 01	-.18102938-01
.33700000 04	.34319101 08	.10396419 07	-.26391838-02	-.59336677 00	-.19141436-01
.35580000 04	.13704750 09	.14158180 06	.50838362-02	-.21132818 01	.28365061-02
.36700000 04	.13280546 09	-.33165500 06	.11353258-01	-.11243619 01	.16617622-01
.37785000 04	.87063223 08	-.35389541 06	.16133976-01	.11113908 01	.21751363-01
.41135000 04	.64146785 06	-.62998037 05	.35632189-01	.19997627 02	.11789954 00
.41340000 04	-.60694339-04	.20428624-02	.35882424-01	.22092241 02	.35880381-01
TRA	END2			995	

SATURN II/VOYAGER

TRW SYSTEMS
06/06/68

VOYAGER STAGE 2 MODES

MODE 1

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.17250170 02	.29756834 03	.13386266 04	.13386266 04	.13386266 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	E.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	.00000000 00	.00000000 00	-.13811306-02	.63339561 00	-.13811306-02
.16200000 04	.10503018 07	.36846514 05	-.13807220-02	.52225318 00	-.14522686-02
.16640000 04	.31986954 07	.55247638 05	-.13790443-02	.45736049 00	-.14863212-02
.16800000 04	.41006184 07	.57472914 05	-.13779638-02	.43355276 00	-.14895617-02
.17900000 04	.10687822 08	.61811911 05	-.13637571-02	.27040755 00	-.14659255-02
.19100000 04	.18246417 08	.63758768 05	-.13311531-02	.93229789-01	-.14777250-02
.19800000 04	.22719583 08	.63960109 05	-.12996426-02	-.91713451-02	-.14466773-02
.23900000 04	.48493813 08	.60780053 05	-.97780427-03	-.54324676 00	-.11175285-02
.24700000 04	.53293154 08	.58989277 05	-.83975577-03	-.63214127 00	-.10467357-02
.25190000 04	.56145797 08	.57425742 05	-.74885519-03	-.68109085 00	-.95034902-03
.26460000 04	.63157385 08	.52886382 05	-.42141358-03	-.78440903 00	-.64434228-03
.28100000 04	.68625623 08	-.24382613 05	.57782415-03	-.80819991 00	.69973721-03
.28900000 04	.64177333 08	-.73001129 05	.11343354-02	-.71797201 00	.14738755-02
.32225000 04	.36321570 08	-.88258531 05	.32381228-02	.15917978 00	.39556719-02
.32585000 04	.33155863 08	-.87526474 05	.37383286-02	.33637947 00	.51276376-02
.33700000 04	.23491553 08	-.83695513 05	.50002304-02	.98097147 00	.63287306-02
.35580000 04	.99536549 07	-.63136562 05	.62296916-02	.22673656 01	.72318593-02
.36700000 04	.36569947 07	-.42384146 05	.65253078-02	.30842616 01	.71980721-02
.37785000 04	.98354094 06	-.55567830 04	.66115528-02	.38404256 01	.66997558-02
.41135000 04	.47453367 04	-.47267165 03	.67903666-02	.61825297 01	.74076151-02
.41340000 04	-.15101328-06	-.45737558-03	.67919590-02	.63318823 01	.67924163-02

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VOYAGER STAGE 2 MODES

MODE 2

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.52994836 02	.28084527 04	.13386266 04	.13386266 04	.13386266 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	-.00000000 00	-.00000000 00	-.17075450-02	.36390432 00	-.17075450-02
.16200000 04	.50752201 07	.16839950 06	-.17055157-02	.21918539 00	-.20325050-02
.16640000 04	.14409397 08	.23319115 06	-.16977567-02	.12616196 00	-.21505551-02
.16800000 04	.18183711 08	.23832739 06	-.16929301-02	.91706205-01	-.21557018-02
.17900000 04	.44503214 08	.23581159 06	-.16322811-02	-.14058856 00	-.20220523-02
.19100000 04	.71452261 08	.21067774 06	-.15011934-02	-.38356128 00	-.19855101-02
.19800000 04	.85526308 08	.19124214 06	-.13802657-02	-.51689279 00	-.18199028-02
.23900000 04	.14832435 09	.10616230 06	-.30017665-03	-.10251937 01	-.54422790-03
.24700000 04	.15574380 09	.76332842 05	.11265823-03	-.10575938 01	-.15517630-03
.25190000 04	.15890151 09	.52556576 05	.37413488-03	-.10567685 01	.18972584-03
.26460000 04	.16173651 09	-.70651028 04	.12532917-02	-.96861455 00	.12830728-02
.28100000 04	.13312791 09	-.59096656 06	.35417461-02	-.45218182 00	.64965788-02
.28900000 04	.76763247 08	-.73525073 06	.44291747-02	.13736493 00	.78489455-02
.32225000 04	-.98866307 08	-.15173563 06	.26953245-02	.25360493 01	.39289474-02
.32585000 04	-.10302188 09	-.78485399 05	.12385747-02	.26747957 01	.24843747-02
.33700000 04	-.10823624 09	.42951239 05	-.35168265-02	.26330255 01	-.41985921-02
.35580000 04	-.66254723 08	.31568580 06	-.10419435-01	.60518504 00	-.15430320-01
.36700000 04	-.31825492 08	.27452627 06	-.12601083-01	-.12449639 01	-.16958642-01
.37785000 04	-.12078194 08	.60393115 05	-.13469600-01	-.29805940 01	-.14428220-01
.41135000 04	-.67628117 05	.67048857 04	-.15835002-01	-.91581498 01	-.24590722-01
.41340000 04	.27763696-05	.12360918-02	-.15858947-01	-.96274483 01	-.15860183-01

06/06/68 SYSTEMS

VOYAGER STAGE 2 MODES		MODE 3		BURNOUT		
OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION	
.92058082 02	.84746903 04	.13386266 04	.13386266 04	.13386266 04	.00000000 00	
STATION IN	M/Q LB IN/IN	V/Q LB/IN	R.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN	
.15410000 04	.00000000 00	.00000000 00	-.42851291-02	.67847238 00	-.42851291-02	
.16200000 04	.26044363 08	.81523513 06	-.42744392-02	.28954645 00	-.58574201-02	
.16640000 04	.68473766 08	.10185183 07	-.42364262-02	.19798726-01	-.62141316-02	
.16800000 04	.84754893 08	.10142711 07	-.42137240-02	-.79422739-01	-.61831824-02	
.17900000 04	.19047480 09	.87491130 06	-.39448102-02	-.72700018 00	-.53909446-02	
.19100000 04	.27809912 09	.57069551 06	-.34125325-02	-.13455114 01	-.47244762-02	
.19800000 04	.31116775 09	.37529330 06	-.29574927-02	-.16447789 01	-.38202359-02	
.23900000 04	.33476451 09	-.29378139 06	.16188891-03	-.22798127 01	.83724842-03	
.24700000 04	.30429546 09	-.48386077 06	.10318544-02	-.21282682 01	.27296115-02	
.25190000 04	.27713317 09	-.62302283 06	.15156779-02	-.19703633 01	.37017229-02	
.26460000 04	.17811412 09	-.91723737 06	.27528042-02	-.13175551 01	.66191782-02	
.28100000 04	-.26225200 08	-.15670759 07	.38846426-02	.23452942 00	.11720022-01	
.28900000 04	-.11053324 09	-.63036707 06	.32669275-02	.92698246 00	.61988673-02	
.32225000 04	-.55809421 08	.91451190 06	-.20693698-02	.62433597 00	-.95044256-02	
.32585000 04	-.22257005 08	.94066285 06	-.26325604-02	-.73557387-02	-.17563717-01	
.33700000 04	.78316271 08	.74739152 06	-.13162456-02	-.18661389 01	-.13179603-01	
.35580000 04	.11281259 09	-.18697071 06	.71244021-02	-.19040030 01	.10092191-01	
.36700000 04	.82077942 08	-.39340055 06	.11592932-01	-.35535884 00	.17837385-01	
.37785000 04	.44602256 08	-.19508586 06	.14263795-01	.16572753 01	.17360395-01	
.41135000 04	.29893770 06	-.29454124 05	.23796680-01	.13067173 02	.62259987-01	
.41340000 04	-.41410668-04	-.71993093-02	.23909687-01	.14192712 02	.23916886-01	

TRW SYSTEMS
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VOYAGER STAGE 2 MODES

MODE 4

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.11148182 03	.12428195 05	.13386266 04	.13386266 04	.13386266 04	.00000000 00
STATION IN	M/O LB IN/IN	V/Q LB/IN	B.SLOPF 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	.00000000 00	.00000000 00	-.55052524-02	.83530372 00	-.55052524-02
.16200000 04	.45909138 08	.14069513 07	-.54862430-02	.31155008 00	-.82181870-02
.16640000 04	.11716838 09	.16786363 07	-.54203856-02	-.66966899-01	-.86798734-02
.16800000 04	.14383766 09	.16502200 07	-.53817068-02	-.20517916 00	-.85860174-02
.17900000 04	.31075539 09	.13204396 07	-.49354970-02	-.10869311 01	-.71180418-02
.19100000 04	.43221701 09	.68004995 06	-.40896028-02	-.18722829 01	-.56529360-02
.19800000 04	.46593864 09	.28798337 06	-.33951883-02	-.22120740 01	-.40572189-02
.23900000 04	.34423297 09	-.90050906 06	.62767577-03	-.24623957 01	.26978115-02
.24700000 04	.26147173 09	-.11882492 07	.14541945-02	-.20983039 01	.56234898-02
.25190000 04	.19837309 09	-.13822054 07	.18374120-02	-.17958334 01	.66872553-02
.26460000 04	-.13612162 07	-.17193042 07	.23495101-02	-.75150218 00	.95925718-02
.28100000 04	-.24419900 09	-.47802697 05	.20158799-04	.65684672 00	.25917228-03
.28900000 04	-.16888218 09	.14037267 07	-.17873361-02	.22754024 00	-.83162976-02
.32225000 04	.88602829 08	-.51314768 06	-.29578438-03	-.17072405 01	.38761479-02
.32585000 04	.66568202 08	-.70341457 06	.82959043-03	-.13387753 01	.11994901-01
.33700000 04	-.14870289 08	-.75425373 06	.20062485-02	.14568457 00	.13978522-01
.35580000 04	-.10143366 09	-.19045920 06	-.31932633-02	.15096542 01	-.17010147-03
.36700000 04	-.10634844 09	.20460531 06	-.80334460-02	.96160231 00	-.11281149-01
.37785000 04	-.72839717 08	.29107925 06	-.11956796-01	-.66833448 00	-.16577102-01
.41135000 04	-.54803032 06	.53783500 05	-.28441385-01	-.16056274 02	-.98675736-01
.41340000 04	-.25491446-04	.50183297-02	-.28656583-01	-.17803814 02	-.28661601-01

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VOYAGER STAGE 2 MODES

MODE 5

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.13205309 03	.17438019 05	.13386266 04	.13386266 04	.13386266 04	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.15410000 04	.00000000 00	.00000000 00	-.20055793-02	.30776755 00	-.20055793-02
.16200000 04	.23517705 08	.71005580 06	-.19957849-02	.10381905 00	-.33745340-02
.16640000 04	.58661979 08	.81393816 06	-.19624813-02	-.51604402-01	-.35429437-02
.16800000 04	.71520029 08	.79057755 06	-.19431858-02	-.10782190 00	-.34782878-02
.17900000 04	.14922092 09	.58722786 06	-.17256245-02	-.45606881 00	-.26962491-02
.19100000 04	.19840900 09	.22268920 06	-.13290947-02	-.73733778 00	-.18410239-02
.19800000 04	.20642120 09	.10071138 05	-.10157755-02	-.83789886 00	-.10389275-02
.23900000 04	.94445731 08	-.53492086 06	.51148013-03	-.64911511 00	.17411832-02
.24700000 04	.47932446 08	-.63097554 06	.70628827-03	-.44289474 00	.29202375-02
.25190000 04	.15668458 08	-.68246058 06	.75945733-03	-.29355863 00	.31540558-02
.26460000 04	-.74506281 08	-.71113489 06	.58023189-03	.14417640 00	.35778349-02
.28100000 04	-.10010935 09	.13641063 07	-.11897563-02	.21951818 00	-.80102878-02
.28900000 04	.15784845 08	.12453534 07	-.15385619-02	-.44601496 00	-.73309030-02
.32225000 04	.44722187 08	-.10041809 07	.27879257-02	-.17847261 00	.10951998-01
.32585000 04	.87496461 07	-.97438958 06	.31716001-02	.51544429 00	.18638101-01
.33700000 04	-.86693873 08	-.43093134 06	.12430487-02	.23176073 01	.80832287-02
.35580000 04	.40352366 08	.12365953 07	-.26239521-02	.84873425-02	-.22252449-01
.36700000 04	.15873180 09	.61446500 06	.21007740-02	-.19506018 01	-.76526384-02
.37785000 04	.15851410 09	-.55157917 06	.94517730-02	-.13200064 01	.18206998-01
.41135000 04	.13893445 07	-.13567172 06	.48247327-01	.28375452 02	.22541719 00
.41340000 04	-.37569281-04	-.19648294-02	.48817475-01	.32295374 02	.48819440-01
TRA	END2			995	

SATURN II/VOYAGER

06/06/68

VOYAGER STAGE 3 MODES

MODE 1

STARTBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.41988199 02	.17630089 04	.83050628 03	.83050627 03	.83050627 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	.00000000 00	.00000000 00	-.57399821-02	.19228712 01	-.57399821-02
.26460000 04	.38922298 07	.56762438 05	-.57317270-02	.11787708 01	-.59709941-02
.28100000 04	.26305934 08	.29004571 06	-.55410075-02	.13919447 00	-.69912360-02
.28900000 04	.49369570 08	.26709855 06	-.52262171-02	-.40182983 00	-.64685359-02
.32225000 04	.93884672 08	-.65609941 05	-.15861972-02	-.18928457 01	-.10527830-02
.32585000 04	.90923154 08	-.98874448 05	-.25414582-03	-.18777587 01	.13152898-02
.33700000 04	.78505323 08	-.14488355 06	.35411080-02	-.14923723 01	.58408468-02
.35580000 04	.41015329 08	-.22196188 06	.81269984-02	.24442340 00	.11650203-01
.36700000 04	.17772662 08	-.17237218 06	.94228747-02	.16059712 01	.12158941-01
.37785000 04	.60168311 07	-.31300656 05	.98836710-02	.28446180 01	.10380507-01
.41135000 04	.32092176 05	-.31867036 04	.11033517-01	.69679077 01	.15194943-01
.41340000 04	-.11461205-06	.13207649-02	.11044683-01	.72627580 01	.11043362-01

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VOYAGER STAGE 3 MODES

MODE 3

STARTBURN

OMEGA	CMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.12549997 03	.15750242 05	.83050628 03	.83050627 03	.83050627 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.54704224-02	.21320160 01	-.54704224-02
.26460000 04	.38866535 08	.56600504 06	-.53880210-02	.12862562 01	-.77738672-02
.28100000 04	.21061278 09	.12209411 07	-.36274830-02	-.33484002 00	-.97321886-02
.28900000 04	.22736867 09	-.48537048 06	-.17037468-02	-.63158176 00	.55379031-03
.32225000 04	-.29867979 08	-.33666720 06	.16011948-02	.11081119 01	.43383264-02
.32585000 04	-.38638790 08	-.14561696 06	.10997224-02	.13002003 01	.34111026-02
.33700000 04	-.44389638 08	.21983920 06	-.88539917-03	.14067762 01	-.43749102-02
.35580000 04	.74771619 08	.75704487 06	-.34531813-03	-.74779611 00	-.12361903-01
.36700000 04	.13910650 09	.19610595 06	.46962476-02	-.15532736 01	.15834547-02
.37785000 04	.12000379 09	-.43956303 06	.10574614-01	-.41366130 00	.17551804-01
.41135000 04	.99761674 06	-.97583202 05	.39136971-01	.22729223 02	.16656811 00
.41340000 04	.81329956-05	.28776826-03	.39540489-01	.25641780 02	.39540201-01

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VOYAGER	STAGE 3	MODES	MODE 4	STARTBURN
OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM ACCELERATION
.14433955 03	.20833906 05	.83050628 03	.83050627 03	.83050627 03 .00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI PHI PR. 1/IN
.25190000 04	.00000000 00	.00000000 00	-.78384613-02	.31836047 01 -.78384613-02
.26460000 04	.76812412 08	.11163836 07	-.76755340-02	.18896777 01 -.12381357-01
.28100000 04	.37791899 09	.13862050 07	-.43150648-02	-.63826711 00 -.11246089-01
.28900000 04	.32154625 09	-.19186916 07	-.12051413-02	-.59554250 00 .77190057-02
.32225000 04	-.95616853 08	.73165085 06	-.10949984-02	.15945554 01 -.70433791-02
.32585000 04	-.63974234 08	.10063842 07	-.22558298-02	.10189118 01 -.18230181-01
.33700000 04	.46593371 08	.82629782 06	-.25896128-02	-.10527594 01 -.15705451-01
.35580000 04	.29349700 08	-.68963558 06	.23350827-02	-.77500903 00 .13281679-01
.36700000 04	-.47449147 08	-.57616953 06	.18971666-02	.71362740 00 .11042714-01
.37785000 04	-.69878916 08	.21546837 06	-.96762669-03	.11290929 01 -.43877595-02
.41135000 04	-.68385298 06	.66553077 05	-.19100214-01	-.11511607 02 -.10600999 00
.41340000 04	-.15180610-05	-.25842913-02	-.19388765-01	-.13336570 02 -.19386180-01

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VOYAGER STAGE 3 MODES

MODE 5

STARTBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.20282494 03	.41137956 05	.83050628 03	.83050627 03	.83050627 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.87555385-02	.31863238 01	-.87555385-02
.26460000 04	.14711734 09	.20766812 07	-.84402075-02	.15033443 01	-.17193913-01
.28100000 04	.35127378 09	-.42741867 07	-.33994411-02	-.49546972 00	.17971492-01
.28900000 04	-.11141943 08	-.32627150 07	-.20463314-02	.10290497 01	.13129087-01
.32225000 04	.12105009 09	.61723375 06	-.49356695-02	-.18253697 01	-.99538300-02
.32585000 04	.12876005 09	-.20684075 06	-.31017492-02	-.20976895 01	.18143714-03
.33700000 04	.70796465 08	-.12989265 07	.17646079-02	-.12308543 01	.22382488-01
.35580000 04	-.11942143 09	-.12380712 06	-.23252226-02	.19748529 01	-.36003019-03
.36700000 04	-.67671444 08	.13289600 07	-.72362231-02	.59811709 00	-.28330827-01
.37785000 04	.41907446 08	.32446424 05	-.72637547-02	-.19735677 01	-.77787772-02
.41135000 04	.93671236 06	-.89318693 05	.10716759-01	.72364996 01	.12735551 00
.41340000 04	.12154861-04	-.20162113-01	.11169472-01	.92963221 01	.11189634-01
TRA	END2			995	

SATURN II / VOYAGER

TRW SYSTEMS

06/06/68

VOYAGER STAGE 3 MODES

MODE 1

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.46155560 02	.21303357 04	.52532503 03	.52532503 03	.52532503 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B. SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	.00000000 00	.00000000 00	-.51497122-02	.17335897 01	-.51497122-02
.26460000 04	.42418589 07	.61865705 05	-.51407161-02	.10630951 01	-.54014948-02
.28100000 04	.23322409 08	.20753172 06	-.49515375-02	.13773710 00	-.59891961-02
.28900000 04	.40064989 08	.19919935 06	-.46883893-02	-.32789549 00	-.56148979-02
.32225000 04	.79252211 08	-.70795787 04	-.17356199-02	-.17180234 01	-.16780623-02
.32585000 04	.78334476 08	-.44001397 05	-.59940296-03	-.17451763 01	.99031909-04
.33700000 04	.71790446 08	-.98994646 05	.27686034-02	-.15177986 01	.43399469-02
.35580000 04	.39539950 08	-.20524142 06	.70847395-02	-.40778533-01	.10342540-01
.36700000 04	.17763442 08	-.16545489 06	.83519405-02	.11785308 01	.10978209-01
.37785000 04	.62718723 07	-.32152250 05	.88211103-02	.22971420 01	.93314634-02
.41135000 04	.34059644 05	-.33801230 04	.10030461-01	.61054319 01	.14444467-01
.41340000 04	-.41331999-06	.75306175-03	.10042388-01	.63839282 01	.10041635-01

TRW SYSTEMS
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VOYAGER STAGE 3 MODES

MODE 2

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.96934983 02	.93963910 04	.52532503 03	.52532503 03	.52532503 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.66009922-02	.21574608 01	-.66009922-02
.26460000 04	.23037828 08	.33266130 06	-.65519575-02	.12296555 01	-.79542042-02
.28100000 04	.10919613 09	.66040598 06	-.55841221-02	-.20644373 00	-.88861518-02
.28900000 04	.14234894 09	.21130535 06	-.45125196-02	-.76950923 00	-.54953352-02
.32225000 04	.61433137 08	-.71154235 06	.77264787-03	-.80017985 00	.65575450-02
.32585000 04	.34730130 08	-.76454621 06	.14673011-02	-.32455409 00	.13602955-01
.33700000 04	-.48167970 08	-.64352419 06	.11273829-02	.11706776 01	.11342053-01
.35580000 04	-.88026580 08	.84086618 05	-.49825894-02	.14849070 01	-.63172976-02
.36700000 04	-.69364400 08	.28665103 06	-.86076182-02	.42006250 00	-.13157635-01
.37785000 04	-.39834910 08	.17060092 06	-.10931789-01	-.11206175 01	-.13639740-01
.41135000 04	-.27438184 06	.27009191 05	-.19557812-01	-.10773447 02	-.54828350-01
.41340000 04	.20575150-05	-.53440053-02	-.19662505-01	-.11759246 02	-.19657161-01

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VOYAGER STAGE 3 MODES

MODE 3

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.12911654 03	.16671082 05	.52532503 03	.52532503 03	.52532503 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.42227310-02	.14931951 01	-.42227310-02
.26460000 04	.28428866 08	.41040572 06	-.41622459-02	.84648535 00	-.58922037-02
.28100000 04	.12675619 09	.58765499 06	-.29924314-02	-.24303168 00	-.59307064-02
.28900000 04	.14201364 09	-.92465398 05	-.18342361-02	-.51009531 00	-.14041645-02
.32225000 04	.58320511 07	-.50732223 06	.14650823-02	.39381159 00	.55896533-02
.32585000 04	-.10909287 08	-.41375178 06	.14244931-02	.71903603 00	.79926165-02
.33700000 04	-.47998344 08	-.69962261 05	-.12057505-04	.14028155 01	.10984545-02
.35580000 04	.43876059 08	.73580223 06	-.11599112-02	-.28141053 00	-.12839311-01
.36700000 04	.11103721 09	.29297320 06	.25036894-02	-.13011805 01	-.21466788-02
.37785000 04	.10330974 09	-.36830657 06	.74209052-02	-.63679708 00	.13267041-01
.41135000 04	.88368637 06	-.86359758 05	.32376308-01	.18943617 02	.14515107 00
.41340000 04	.11392174-04	.28017628-03	.32736584-01	.21473872 02	.32736304-01

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VOYAGER STAGE 3 MODES

MODE 4

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.16567259 03	.27447407 05	.52532503 03	.52532503 03	.52532503 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.82997132-02	.31869759 01	-.82997132-02
.26460000 04	.10004323 09	.14383913 07	-.80866651-02	.17443587 01	-.14149827-01
.28100000 04	.39438817 09	.79035688 06	-.41464367-02	-.76114131 00	-.80982210-02
.28900000 04	.33064630 09	-.17029406 07	-.97752678-03	-.66468185 00	.69431270-02
.32225000 04	-.10179320 09	.27223514 06	.10357096-03	.19672453 01	-.21097228-02
.32585000 04	-.82702981 08	.77318645 06	-.12462656-02	.16365634 01	-.13519066-01
.33700000 04	.12158417 08	.93054951 06	-.28915082-02	-.13898712 00	-.17662135-01
.35580000 04	.54290099 08	-.37888457 06	.15358138-02	-.98231850 00	.75498544-02
.36700000 04	-.32091878 06	-.58273972 06	.28599065-02	.15349515 00	.12109743-01
.37785000 04	-.35310946 08	.76427165 05	.18198866-02	.97706581 00	.60675703-03
.41135000 04	-.43668389 06	.42216937 05	-.86292655-02	-.54098423 01	-.63759169-01
.41340000 04	.15196685-05	.32890441-01	-.88229295-02	-.64875469 01	-.88558199-02

TRW SYSTEMS

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VOYAGER STAGE 3 MODES

MODE 5

MIDBURN

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.21872729 03	.47841625 05	.52532503 03	.52532503 03	.52532503 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.32586180-02	.12413656 01	-.32586180-02
.26460000 04	.66664319 08	.93814682 06	-.31156202-02	.56878646 00	-.70701325-02
.28100000 04	.18050122 09	-.10735195 07	-.81217293-03	-.32857227 00	.45554246-02
.28900000 04	.45489653 08	-.17082961 07	.17040697-03	.29220994 00	.81159701-02
.32225000 04	.51854545 07	.11180877 07	-.27592528-02	-.28611372 00	-.11849397-01
.32585000 04	.40869348 08	.81143867 06	-.24144013-02	-.96182585 00	-.15294380-01
.33700000 04	.92749108 08	-.63589205 06	.10915870-02	-.18845846 01	.11185111-01
.35580000 04	-.16017187 09	-.79159798 06	-.21073898-02	.23647464 01	.10457657-01
.36700000 04	-.13367827 09	.18989595 07	-.99958777-02	.12591314 01	-.40138091-01
.37785000 04	.44041820 08	.16302324 06	-.11224944-01	-.27878174 01	-.13812614-01
.41135000 04	.14722189 07	-.13941772 06	.13949910-01	.94373112 01	.19601156 00
.41340000 04	.94708679-05	.14738853-02	.14687136-01	.12522449 02	.14685662-01

TRA END2

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SATURN II/VOYAGER

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VOYAGER STAGE 3 MODES

MODE 1

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.51793081 02	.26825233 04	.22014375 03	.22014374 03	.22014374 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	.00000000 00	.00000000 00	-.38174845-02	.13599448 01	-.38174845-02
.26460000 04	.42212965 07	.61831456 05	-.38085483-02	.85872015 00	-.40691826-02
.28100000 04	.18088734 08	.99108113 05	-.36375437-02	.17742528 00	-.41330842-02
.28900000 04	.26119475 08	.10020543 06	-.34542300-02	-.14456218 00	-.39203017-02
.32225000 04	.53141916 08	.49785915 05	-.15934164-02	-.12149015 01	-.19981800-02
.32585000 04	.54336731 08	.16312605 05	-.81812626-03	-.12778720 01	-.10770565-02
.33700000 04	.54555343 08	-.38454434 05	.16301988-02	-.12363014 01	.22405866-02
.35580000 04	.32354927 08	-.15813478 06	.50474205-02	-.22915453 00	.75574964-02
.36700000 04	.15250197 08	-.13446411 06	.61045921-02	.67407640 00	.82389430-02
.37785000 04	.56757671 07	-.28561253 05	.65170432-02	.15145872 01	.69703965-02
.41135000 04	.31554093 05	-.31290567 04	.76241719-02	.44776314 01	.11710318-01
.41340000 04	-.40529514-07	-.49566717-03	.76353181-02	.47014338 01	.76358138-02

TRW SYSTEMS
06/06/68

VOYAGER STAGE 3 MODES

MODE 2

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.11486916 03	.13194923 05	.22014375 03	.22014374 03	.22014374 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.40654662-02	.99345914 00	-.40654662-02
.26460000 04	.14098363 08	.19595729 06	-.40350079-02	.42246646 00	-.48610146-02
.28100000 04	.50613065 08	.20149185 06	-.35207231-02	-.38293510 00	-.45281824-02
.28900000 04	.63982528 08	.13807226 06	-.30411489-02	-.70920548 00	-.36833454-02
.32225000 04	.52656838 08	-.23443552 06	-.10859032-03	-.11685670 01	.17973894-02
.32585000 04	.41577096 08	-.37696588 06	.57602469-03	-.97981910 00	.65596100-02
.33700000 04	-.36499483 07	-.45486889 06	.14535498-02	-.13018794 00	.86736907-02
.35580000 04	-.66132791 08	-.18868983 06	-.15840853-02	.92357045 00	.14109913-02
.36700000 04	-.75583212 08	.99213350 05	-.48929114-02	.71526141 00	-.64677265-02
.37785000 04	-.54192792 08	.21265609 06	-.77550633-02	-.31915604 00	-.11130557-01
.41135000 04	-.41690179 06	.40883729 05	-.20152598-01	-.11466583 02	-.73541503-01
.41340000 04	.94743647-06	-.23993884-02	-.20317444-01	-.12764738 02	-.20315045-01

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VOYAGER STAGE 3 MODES

MODE 3

BURNOUT

OMEGA

OMEGA SQUARED

TOTAL MASS

GENERALIZED MASS

INTG. PHI SQ OM

ACCELERATION

.14286195 03

.20409538 05

.22014375 03

.22014374 03

.22014374 03

.00000000 00

STATION IN

M/Q LB IN/IN

V/Q

LB/IN

B. SLOPE 1/IN

Y/Q EQ. PHI

PHI PR. 1/IN

.25190000 04

-.00000000 00

-.00000000 00

-.53627872-02

.12828594 01

-.53627872-02

.26460000 04

.27854259 08

.38288887 06

-.53023814-02

.49389682 00

-.69163493-02

.28100000 04

.95453326 08

.33699379 06

-.43121823-02

-.63828570 00

-.59971512-02

.28900000 04

.11564322 09

.18370289 06

-.34263078-02

-.10441650 01

-.42807398-02

.32225000 04

.61466153 08

-.51513158 06

.10740559-02

-.10530106 01

.52621175-02

.32585000 04

.39528066 08

-.68980410 06

.18087009-02

-.64380217 00

.12757972-01

.33700000 04

-.35669648 08

-.54737521 06

.18507466-02

.78550017 00

.10539242-01

.35580000 04

-.18182299 08

.50186027 06

-.15984392-02

.50550173 00

-.95644751-02

.36700000 04

.36784462 08

.39973746 06

-.11483301-02

.54416552 00

-.74933690-02

.37785000 04

.51397489 08

-.16100650 06

.99094844-03

-.79051037 00

.35466071-02

.41135000 04

.49612030 06

-.48303036 05

.14229531-01

.85414185 01

.77307099-01

.41340000 04

.12235254-05

-.19715080-02

.14438169-01

.98739273 01

.14440141-01

TRW SYSTEMS
06/06/68

VOYAGER STAGE 3 MODES

MODE 4

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.21593816 03	.46629289 05	.22014375 03	.22014374 03	.22014374 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.43935377-02	.10484027 01	-.43935377-02
.26460000 04	.50766593 08	.67722005 06	-.42823806-02	.29379131 00	-.71370245-02
.28100000 04	.15164758 09	.32268904 06	-.26058469-02	-.78283079 00	-.42192921-02
.28900000 04	.16004076 09	-.56880141 05	-.12872704-02	-.97854064 00	-.10227116-02
.32225000 04	-.19170439 08	-.72979053 06	.20198120-02	.45384379 00	.79530682-02
.32585000 04	-.40333709 08	-.41469785 06	.15778285-02	.86443063 00	.81603338-02
.33700000 04	-.59816242 08	.54797837 06	-.10091587-02	.12160670 01	-.97072280-02
.35580000 04	.10435405 09	.42774588 06	.14090664-02	-.15651941 01	-.53805507-02
.36700000 04	.81282277 08	-.12151000 07	.63677748-02	-.75608058 00	.25655075-01
.37785000 04	-.29692757 08	-.90465498 05	.70238846-02	.17785346 01	.84598447-02
.41135000 04	-.91621269 06	.86872328 05	-.89761052-02	-.60653476 01	-.12242022 00
.41340000 04	.39993390-05	-.20357467-01	-.94321370-02	-.80024629 01	-.94117794-02

TIPW SYSTEMS
06/06/68

VOYAGER STAGE 3 MODES

MODE 5

BURNOUT

OMEGA	OMEGA SQUARED	TOTAL MASS	GENERALIZED MASS	INTG. PHI SQ DM	ACCELERATION
.26029021 03	.67750994 05	.22014375 03	.22014374 03	.22014374 03	.00000000 00
STATION IN	M/Q LB IN/IN	V/Q LB/IN	B.SLOPE 1/IN	Y/Q EQ. PHI	PHI PR. 1/IN
.25190000 04	-.00000000 00	-.00000000 00	-.58598290-02	.14297698 01	-.58598290-02
.26460000 04	.99178139 08	.12955148 07	-.56412864-02	.30167009 00	-.11102190-01
.28100000 04	.26777272 09	.28143051 06	-.25334382-02	-.12220418 01	-.39405908-02
.28900000 04	.25271648 09	-.51645533 06	-.31964855-03	-.12640130 01	.20824693-02
.32225000 04	-.97614734 08	-.72368457 06	.21772108-02	.15394547 01	.80608250-02
.32585000 04	-.10356327 09	.40832528 06	.68049240-03	.16905148 01	-.58008610-02
.33700000 04	-.24037521 08	.12950681 07	-.25262585-02	.29422659 00	-.23082895-01
.35580000 04	-.30095092 08	-.12098193 07	-.58788376-03	.11111234 00	.18615597-01
.36700000 04	-.10044303 09	.58757577 06	-.43341134-02	.98498478 00	-.13660713-01
.37785000 04	-.28696376 07	.26584055 06	-.64421369-02	-.11906724 01	-.10661828-01
.41135000 04	.11308018 07	-.10489741 06	.69623601-02	.45609421 01	.14394492 00
.41340000 04	.54541388-05	-.27522671-01	.75763951-02	.65775970 01	.76039178-02

TRA

END2

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Actuation System Transfer Function and Limits

Atlas SLV3 C/Centaur and Atlas SLV3 A/Burner 2

Booster Engine:

$$\frac{\delta}{\delta_c} = \frac{1}{\left(\frac{s}{27.5} + 1\right) \left[\frac{s^2}{(106.3)^2} + \frac{2(.641)}{(106.3)} s + 1 \right]}$$

Deflection Limit = 5 degrees

Actuation Rate Limit = 28 deg/sec

Sustainer Engine:

$$\frac{\delta}{\delta_c} = \frac{1}{\left[\frac{s}{12.7} + 1 \right] \left[\frac{s^2}{(48.3)^2} + \frac{2(.085)s}{(48.3)} + 1 \right]}$$

Deflection Limit = 3 degrees

Actuation Rate Limit = 42 deg/sec

Saturn I B/Centaur

SIB Engine:

$$\frac{\delta}{\delta_c} = \frac{1}{\left[\frac{s}{16.8} + 1 \right] \left[\frac{s^2}{(127.5)^2} + \frac{2(.0455)}{(127.5)} s + 1 \right]}$$

Deflection Limit = 8 degrees

Actuation Rate Limit = 24 deg/sec

S IV B Engine:

$$\frac{\delta}{\delta_c} = \frac{\left[\frac{s}{12.5} + 1 \right]}{\left[\frac{s}{10.49} + 1 \right] \left[\frac{s}{32.26} + 1 \right] \left[\frac{s^2}{(34.68)^2} + \frac{2(.327)}{(34.68)} s + 1 \right]}$$

Deflection Limit = 7 degrees

Actuation Rate Limit = 8 deg/sec (at rated load)

Saturn V/Voyager

SIC Engine:

$$\frac{\delta}{\delta_c} = \frac{1}{\left[\frac{s^2}{(34.48)^2} + \frac{2(.434)}{(34.48)} s + 1 \right] \left[\frac{s^2}{(84.09)^2} + \frac{2(.594)}{(84.09)} s + 1 \right]}$$

Deflection Limit = 5.15 degrees

Actuation Rate Limit = 7 deg/sec

S II Engine:

$$\frac{\delta}{\delta_c} = \frac{\left[\frac{s}{12.5} + 1 \right]}{\left[\frac{s}{11.02} + 1 \right] \left[\frac{s^2}{(33.73)^2} + \frac{2(.4)}{(33.73)} s + 1 \right] \left[\frac{s^2}{(94.22)^2} + \frac{2(.987)s}{(94.22)} + 1 \right]}$$

Deflection Limit = 7 degrees

Actuation Rate Limit = 9.6 deg/sec

S IV B Engine:

$$\frac{\delta}{\delta_c} = \frac{\left[\frac{s}{12.5} + 1 \right]}{\left[\frac{s}{10.49} + 1 \right] \left[\frac{s}{32.26} + 1 \right] \left[\frac{s^2}{(34.68)^2} + \frac{2(.327)s}{(34.68)} + 1 \right]}$$

Deflection Limit = 7 degrees

Actuation Rate Limit = 8 deg/sec (at rated load)